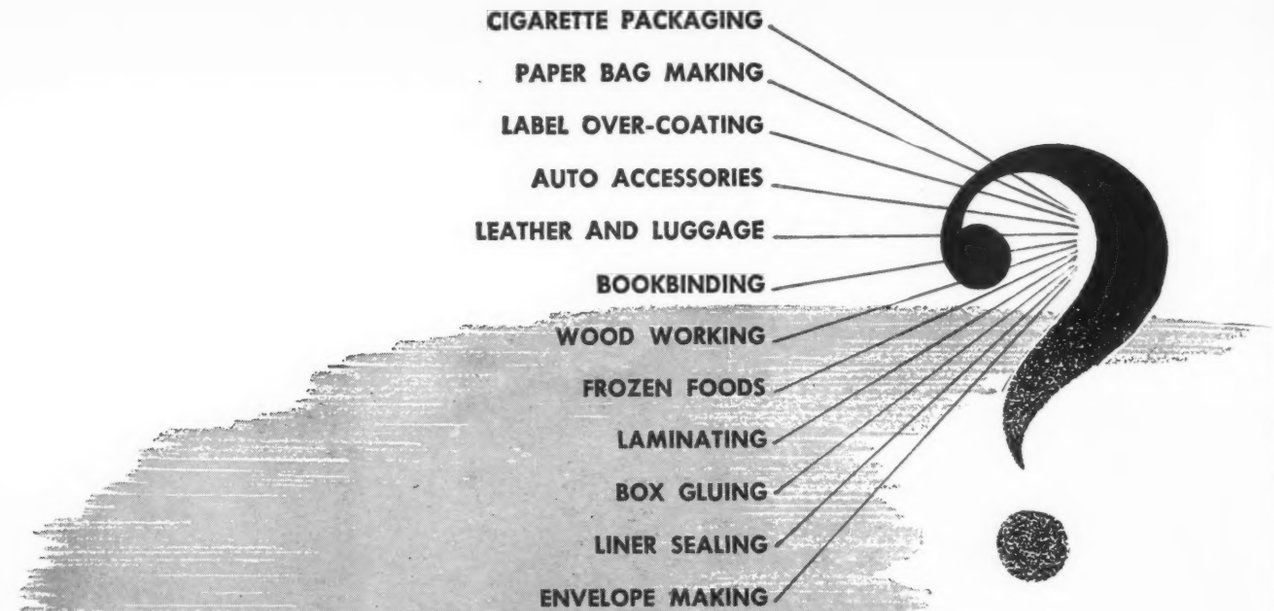
Modern PACKAGING

BRUARY 1947



"" is the answer a Resyn adhesive

Each "RESYN" Adhesive is a complex blend that is designed to do a specific job exceedingly well. Many amazing developments have resulted from applying them to packaging, converting and assembling operations previously thought to be at their highest level of efficiency.

Why? Because "RESYN" adhesives provide higher resistance against all forms of moisture and temperature variations. They're vermin-proof, mould-proof, age-proof. They're economical. They increase production speeds, reduce supervision, offer greater versatility, spread and penetrate uniformly, and bring increased sales advantages to many products.

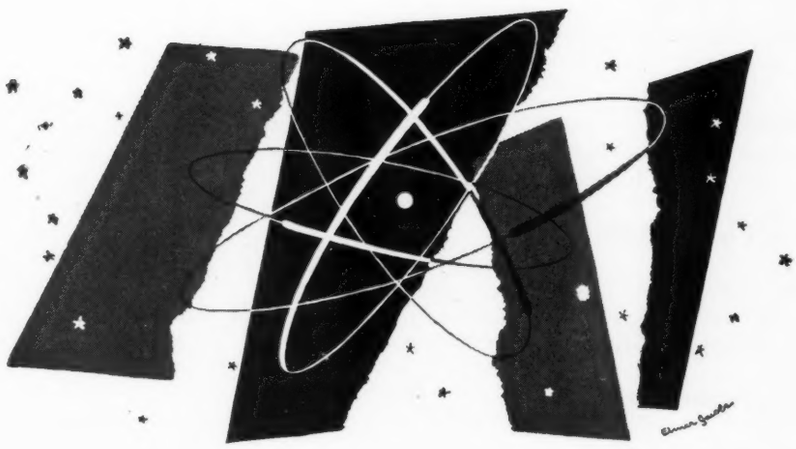
What are some uses? *In bag making:* for difficult stocks . . . breather action . . . moisture vapor barrier. *In luggage making:* for softness and pliability . . . resistance to fungus . . . laminating before shaping under heat and pressure. *In chemical packaging:* for all-purpose, all-weather labeling and overcoating on wood, fiber, painted steel, tin and glass. *In upholstering:* for adhering cloth to cloth, chipboard, wood, metal, wadding, etc.

A whole new world of uses is opening up for "RESYN" adhesives. They're readily available. So get acquainted with their types, properties, uses. All are quickly summed up by National Adhesive in an interesting booklet: When and How to Use "RESYN" Adhesives. Write for your copy — NOW!

Offices: 270 Madison Avenue, New York 16; 3641 So. Washtenaw Avenue, Chicago 32; 735 Battery Street, San Francisco 11, and in other principal cities. In Canada: Meredith, Simmons & Co., Ltd., Toronto. In England: National Adhesives, Ltd., Slough.

National ADHESIVES

EVERY TYPE OF ADHESIVE FOR EVERY INDUSTRIAL US



survival of the fittest

"ONLY THE GOOD ENDURE" is an aphorism no less true than trite. An excellent mechanical example is the continuous thread cap.

The first screw finish jars and caps were produced by John L. Mason in 1858. But the mechanical principle, upon which this method of sealing is based, was old when first put to use by the ancient Greek mathematician, Archimedes.

Since Mr. Mason's invention, or development, many improvements in sealing glass packages have been attempted: Caps with fat, lean, flat-pitch, and steep-pitch threads; single-turn and double-turn, continuous and interrupted threads; outside and inside threads; airtight and vacuum, crimped and friction-grip, side-seal, top-seal, and inside-seal caps; with liners, rubber rings, composition gaskets . . . *ad infinitum!*

Strange that the continuous thread cap has endured? . . . that it has grown increasingly popular with the years? . . . that the limits of its usefulness have never been reached? Not at all! It is the most practical, convenient, and economical closure for the widest variety of products, packages, and sealing conditions. And the one universally preferred by that great critical body, the consuming public.

Proof? Certainly! In letters recently published by a Chicago newspaper, housewives complained bitterly about closures requiring herculean effort to pry them loose from jars and bottles, and which could not be replaced after they were removed. In summing up, they said, "In the future we shall buy only merchandise in packages sealed with screw caps."

PHOENIX METAL CAP CO.

2444 W. Sixteenth St., Chicago 8 3720 Fourteenth Ave., Brooklyn 18

Modern PACKAGING

VOLUME 20

NUMBER 6

FEBRUARY 1947

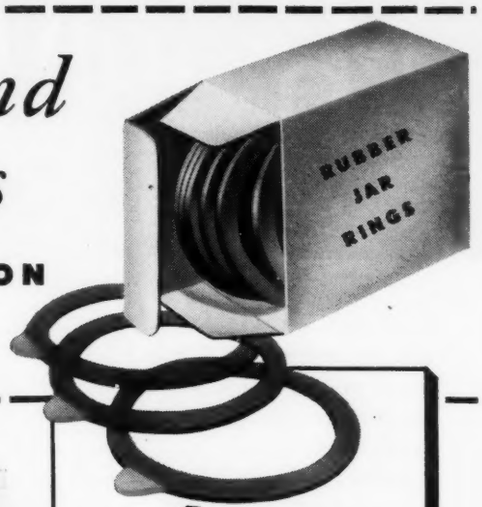
GENERAL

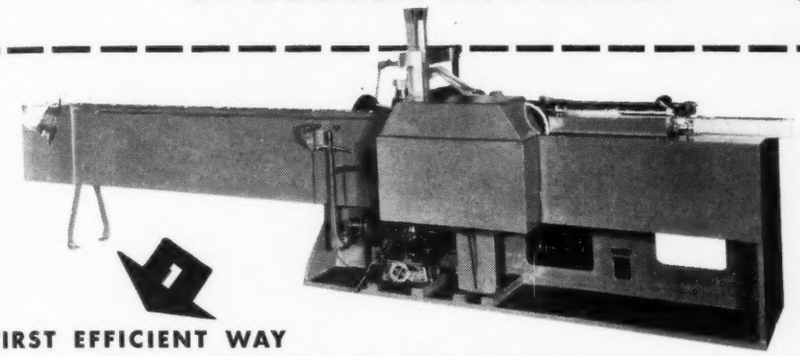
TECHNICAL

DEPARTMENTS

ALL THREE METHODS *demand high speed cartoners*

TO LOWER COSTS, STEP UP PRODUCTION of RUBBER JAR RINGS

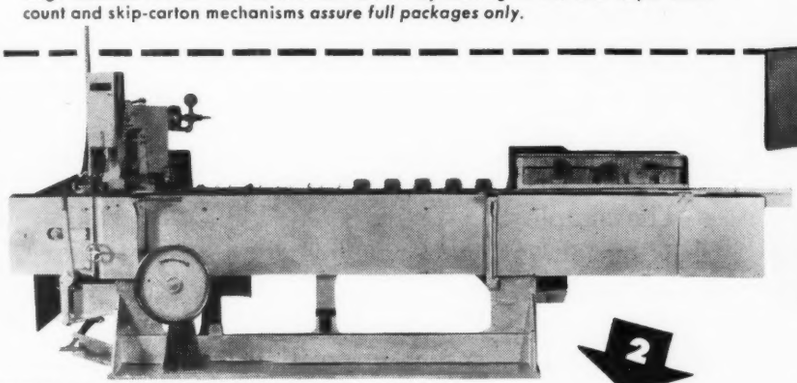




1

FIRST EFFICIENT WAY

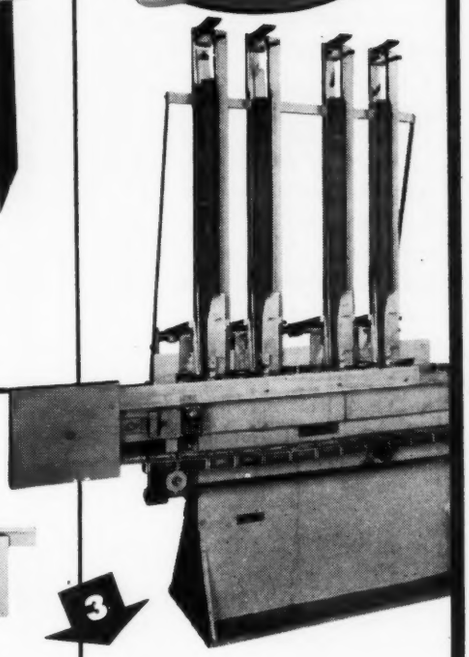
is through the use of the Redington Type 23. Its intake consists of *a series of pockets*. Cut rubbers are brought to operators stacked side by side to form a *continuous tube*. Each operator wears a finger ring with gauge attached. This gauge is slipped into the end of the tube as far as it will go and 12 jar rubbers are picked off and placed in conveyor pocket. The cartons are fed, expanded . . . rings inserted . . . and the cartons are closed by tucking in the end flaps. Short count and skip-carton mechanisms *assure full packages only*.



2

SPECIAL COUNTING

Some manufacturers use in conjunction with their ring cutting equipment a *specially designed counting unit* that discharges 12 rings. In plant set-ups like this, Redington Type 9 cartoners are supplied driven by the same power source as the cutting unit. *Expanded cartons* are carried along standing upright in the pocket . . . the bottom end is closed and cartons are brought under the counting unit which drops rings into carton and then top end of the carton is closed.



3

JAR RING COUNTER

—in some places, it is *advisable* to magazine feed the rings . . . and Redingtons are then equipped with an *automatic counter*. The rubbers are stacked in the magazine and automatically transferred in stacks of 12 to the intake conveyor.

By their very nature, jar rubbers are hard to handle. Resistance caused by the friction of rubber must be overcome to assure smooth, efficient high speed automatic cartoning. Producers' varying manufacturing methods and other conditions require individualized cartoning machines to give them the *high-speed, low cost* production, always the goal of Redington engineers. Today *most famous brands* of rubber jar rings are *Redington-cartoned* because executives rely on the varied and complete *experience* of our engineers to design a practical machine for any type of package.

Another example of Redington's ability to provide proper equipment no matter how "different" the problem.

F. B. REDINGTON CO. (Est. 1897) 110-112 S. SANGAMON ST., CHICAGO 7, ILL.

1897 REDINGTON 1947
FIFTIETH YEAR

AUTOMATIC CARTONING • WRAPPING • SPECIAL PACKAGING

EDITORIAL

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Member of Audit Bureau of Circulations

SOONER THAN YOU THINK

LAST MONTH'S issue brought out some surprising facts about the current rate of production of packaging supplies. We say surprising because we don't know of any packager today who is getting *all* the materials he wants, of the *kind* he wants, *when* he wants them. Yet the figures show that production of materials in 1946 far exceeded any previous year—with further expansion planned for 1947.

Perhaps the answer lies in facts like these:

▶ The head of one of the wholesale grocers' organizations reports that stocks of some packaged foods are piling up in warehouses to a dangerous level and warns his members that price cutting may be required.

▶ Stocks of frozen foods are at the highest level in history; consumer demand has not come up to expectations and some packers who have not been too careful about quality are in trouble.

The simple fact seems to be that the pipelines of distribution, which for so long appeared to have an inexhaustible capacity, have in many cases suddenly become filled. The retailer and the consumer—like the packager—are now in position to pick and choose.

We think this is a healthy condition. It means a return to competitive merchandising, which has always brought out the best in products and packaging.

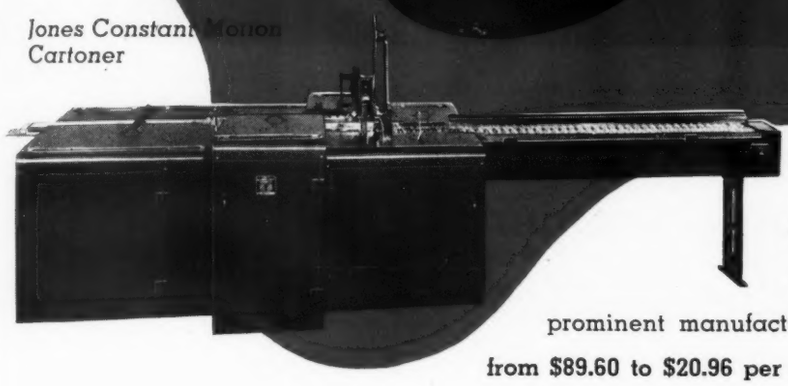
The intelligent packager will gauge both his buying and his selling accordingly.

He will buy only packaging materials and equipment of good quality—and only in reasonable quantities.

He will re-examine his packages from the standpoints of both product protection and sales appeal. He will market-test every major package change—the only way to be sure. With the consumer once more in a position to demand quality, he will make sure that his package spells quality.

The Editors

SAVED... $68.64 per day on cartoning costs!



Jones Constant Motion Cartoner

Converting from a hand-loading line to Jones Constant Motion Cartoning, a prominent manufacturer reports **reducing his cartoning costs from $89.60 to $20.96 per day.**

Now, one Jones Cartoner is used to carton the daily output of 400 gross. The machine feeds and opens the carton, gradually inserts load into the carton, and closes and tucks both carton ends. When required, a speed of 140 packages per minute is used.

The product is cartoned better and faster. Human error is eliminated—empty or defective cartons cannot pass through the machine. Unit loading costs are reduced to an absolute minimum.

Compare Jones Cartoning with **your** present methods. Compare **costs**, too! Write today for complete information, enclosing samples of your product.

R. A. JONES & COMPANY, INC.

P. O. Box 485 CINCINNATI, OHIO

THE MAJORITY OF AMERICA'S CARTONED PRODUCTS ARE JONES CARTONED

It is a FACT that nearly all your food protection paper requirements can be filled by **one** dependable source of supply.

KVP

MAKERS OF

FOOD PROTECTION PAPERS

Parchment • Greaseproof • Waxed • Special Treated

KALAMAZOO VEGETABLE PARCHMENT COMPANY
PARCHMENT • KALAMAZOO 99 • MICHIGAN • U. S. A.

HYCAR AMERICAN RUBBER LATEX...
a new material for paper impregnation

HYCAR latex, when used as an impregnant for even inexpensive papers, imparts to the papers many desirable properties not readily obtainable with other impregnants.

Tear and wet strength are very considerably increased. Resistance to oils, chemicals, aging, and flexing are added in very desirable degrees. HYCAR-impregnated papers may then be coated with any one of a number of coating materials to impart additional properties.

Potential applications for papers of this sort range from gaskets to leather replacement materials, shelf paper to floor coverings, wallpaper to insoles.

HYCAR latex is very easy to use. No vulcanization is required. Normal drying times are used. And in latex form HYCAR is an inherently safe material to handle. No solvent system is needed even when HYCAR latex is used as a coating material.

We would be glad to work with you on any problems relating to the use of HYCAR latex. For more information, please write Department HI-1, B. F. Goodrich Chemical Company, Rose Building, Cleveland 15, Ohio.

Hycar
Reg. U.S. Pat. Off.
American Rubber

B. F. Goodrich Chemical Company
A DIVISION OF THE B. F. GOODRICH COMPANY

GEON polyvinyl materials • HYCAR American rubber • KRISTON thermosetting resins • GOOD-RITE brand chemicals

"It's a fake. I hear they're stuck together with Swift's Glue."

Swift *has* glues for practically every purpose, and they're available now for immediate delivery.

Some Swift Adhesives are extremely fast-setting... others hold a long tack. Some are flexible ... others dry hard. Some are for paper or cardboard... others are for tougher jobs, for joining wood, metals, acetate, and so forth.

Swift Adhesives machine beautifully, and are highly efficient for almost every gluing operation. Send for a trial shipment of the adhesive we've developed for *your* particular job.

Swift & Company

ADHESIVE PRODUCTS DEPARTMENT

Write your nearest Swift factory or sales office:

Atlanta	Los Angeles	So. St. Paul
Chicago	National Stock Yards, Ill.	
Cleveland	No. Portland, Ore.	In Canada:
Denver	Omaha	Swift Canadian Co., Limited
E. Cambridge, Mass.	San Antonio	Montreal
Ft. Worth	Sioux City	Toronto
Harrison, N. J.	So. San Francisco	Vancouver
Kansas City, Kan.	So. St. Joseph	Winnipeg

There's a Swift's Glue for every purpose

Including:

Carton Sealing
Case Sealing
Set-up Boxes
Folding Boxes
Flexible Coatings
Bottle Labeling
Can Labeling
Tube Winding

Buyer on the "warpath" for a better steel pail

You don't have to scalp a salesman to get the best in steel containers. Continental makes a complete line of quality light and heavy gauge pails and drums, large and small, for a hundred uses—liquid, solid, semi-solid, and dry bulk. Right now, we can't make enough to go around. But when we can —Continental offers best in quality, best in service.

SPECIAL NOTE TO MANUFACTURERS: *Consumers of your products rate these containers high because of their long re-use value around the plant or on the farm. This is a plus value to remember.*

A COMPLETE LINE OF STEEL SHIPPING CONTAINERS

The Triple-C means best in quality, service

CONTINENTAL CAN COMPANY

100 East 42nd Street, New York 17, N. Y.

Some Texcel seals a package quick

And adds a lot of selling kick!

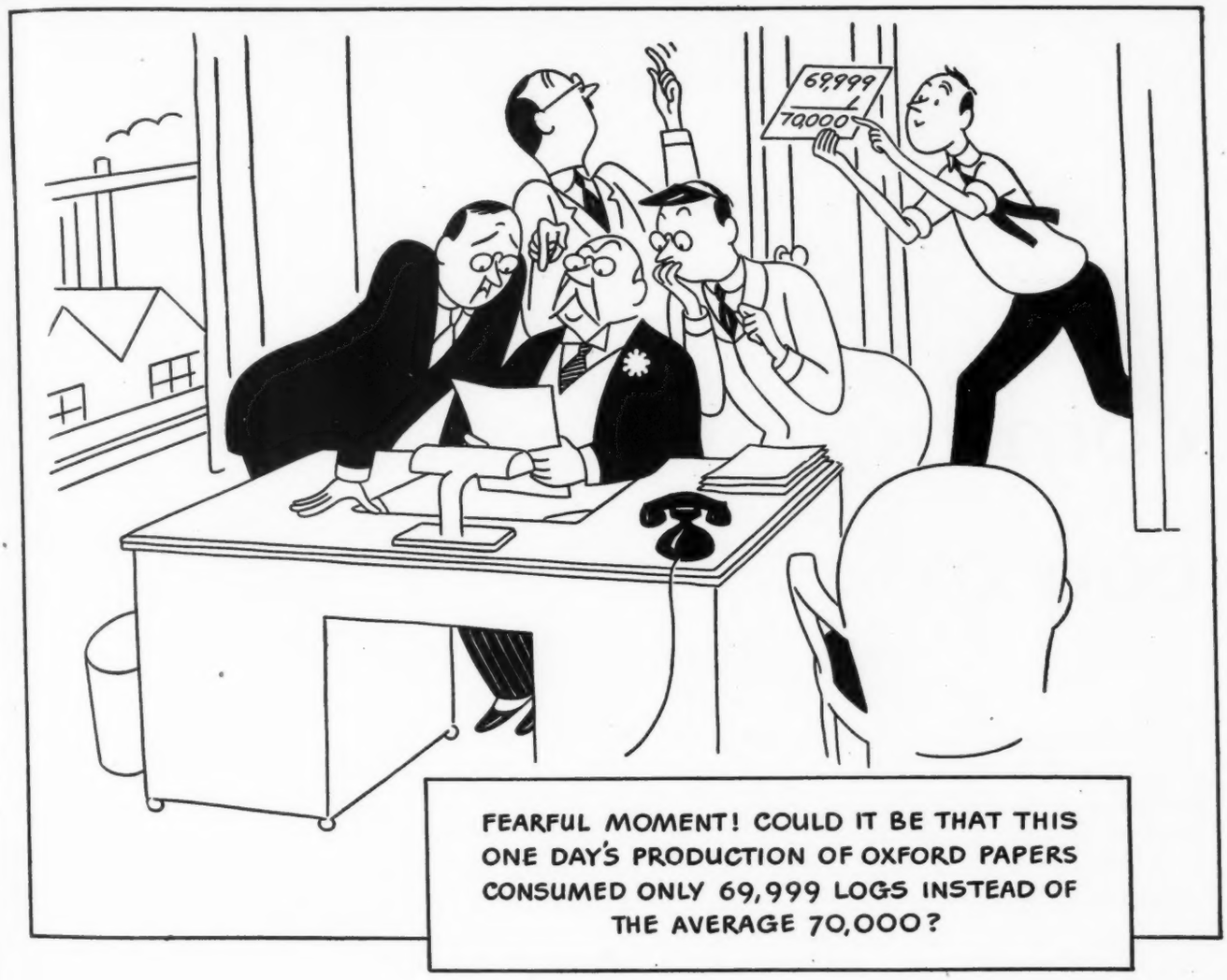
A neat-appearing package means
Much greater sales appeal;
You add both style and speed when you
Use Texcel Tape to seal.

"TEXCEL" REG. U. S. PAT. OFF.

INDUSTRIAL TAPE CORPORATION

New Brunswick, N. J.

Near Crisis at Oxford Paper Company by Tony Barlow



IN the making of over 1,000 miles of quality paper a day Oxford Paper Company uses an average of 70,000 logs of pulpwood.

At Rumford, Oxford has near-by access to vast timber resources of the proper kinds of fine quality pulpwood for making its papers — spruce, fir, hemlock, poplar and hardwood.

So Oxford quality papers start with the right pulpwood. In fact, from logs to finished paper — Oxford has direct control over every operation.

To this is added the skill of veteran papermaking craftsmen, some in the third generation at Oxford. Supplementing their craftsmanship are Oxford's never-ending control inspections to make sure that high standards of quality are maintained.

It is this combination of know-how, completeness and testing which has helped Oxford to become quality-paper headquarters. Paper merchants in key cities coast to coast distribute Oxford quality papers.

Included in Oxford's line of quality printing and label papers are: ENAMEL-COATED — Polar Superfine, Maineflex, Maineflex C1S Litho, Mainefold and White Seal; UNCOATED — Engravatone, Carfax, Aquaset Offset, Duplex Label and Oxford Super, English Finish and Antique.

OXFORD PAPER COMPANY

230 PARK AVENUE, NEW YORK 17, N. Y.

MILLS at Rumford, Maine and West Carrollton, Ohio

WESTERN SALES OFFICE: 35 East Wacker Drive, Chicago 1, Ill.

DISTRIBUTORS in 48 Key Cities

commonplace into coq d'or...

to petrucelli... fine designer, versatile artist, signer of many Fortune covers, we gave a commission to translate the familiar trademark of a cockerel in the new colored foils.

Petrucelli first reduced his subject to colored silhouettes—comb, crest, legs, chassis, empennage...appliqued on a striking poster.

the illusion of depth fostered by the foils delighted our own designers...further suggested a sculptural treatment. Hand scored with clever curves, each segment attained actual contours.

And our Petrucelli poster was converted into a bas relief, rich in anatomical illusion...a glorious bird displayed against a buff background.

the background did not do full justice to the proud poultry exhibit, in the judgment of the Schenley Reserve advertising manager...

So Joseph Binder, well-known Viennese designer, devised an antiqued setting of dull blue, with a shadowed light border. The contrast made the cockerel almost crow!...

the foil rooster went into production... 5,000 of one size, 7,500 of another. And each of the quantity produced replicas was an original!

In due time, the display panel went to the trade. The reception was quietly sensational.

veteran barkeeps who usually look on displays as intruders of space better occupied by bottles, said this Schenley Petrucelli-Binder production was the best display ever!

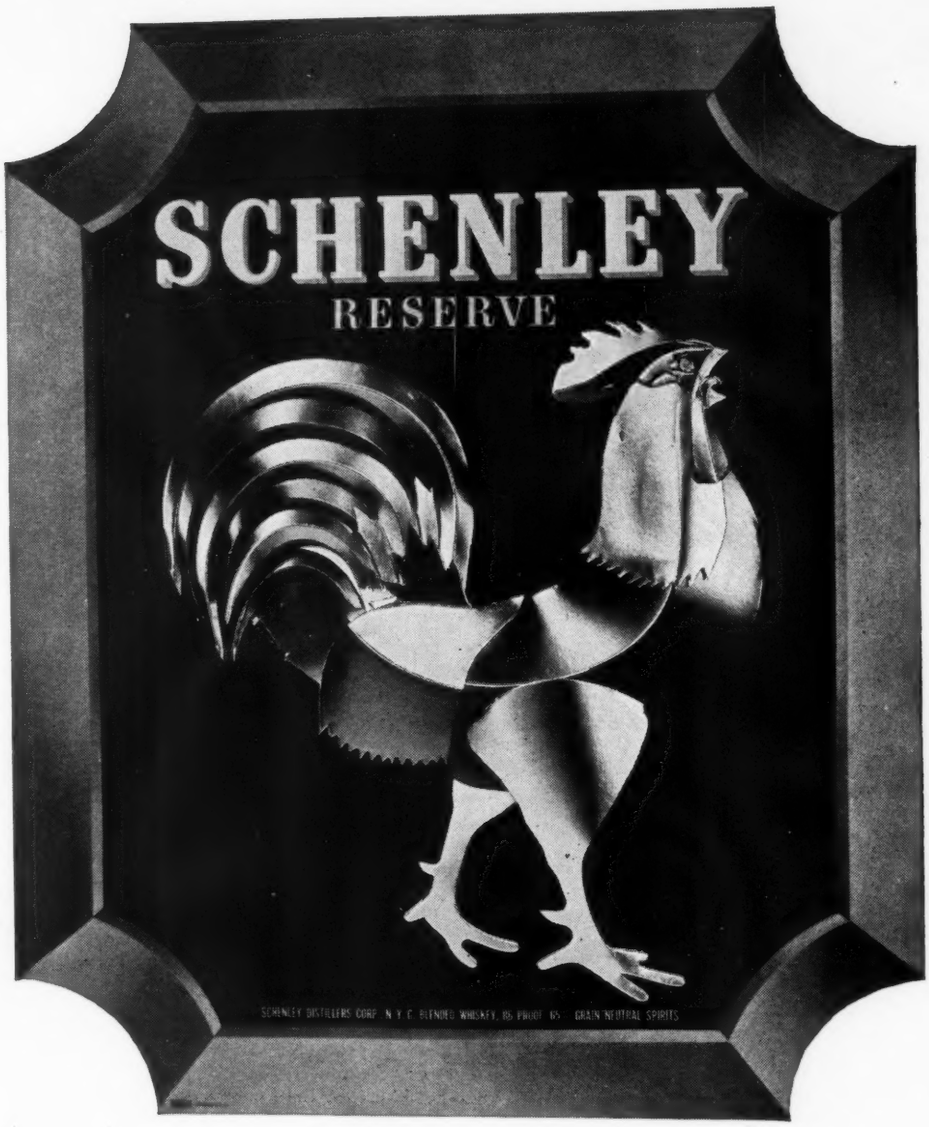
Mr. Customer, his wife and lady friend, the folks who don't know Art, but do know what they like...looked, liked and said so.

beer-drinking Dodger fans stopped their discussion of the favorite's chances long enough to admit the boid was a beaut.

Hunters, farmers, traveling salesmen and truck drivers in hundreds of bars discussed the foil bird as though it were a blue ribbon show bird.

one decorator with a *haut ton* clientele made the radiant rooster the main motif of a room done in modern decor.

After months of use, the chanticleer has aged with the grace of good gesso, is still worth looking at, visually effective.



WORTH NOTING also is the fact that this Schenley display achieved distinction in one of the most competitive of display fields.

Now distillers regard display material as more important, spend more on display material, than any other class of merchandisers.

LIMITED BY a wide variety of state laws, liquor displays are severely restricted as to size, subject matter, wordage and use.

Yet this foil rooster was an outstanding display despite restrictions and competition.

PRINTING CRAFTS' scales are fixed. The prices of board and paper are a matter of record. Production costs are routinely uniform.

But ideas are still beyond price, multiply the value of printed matter manyfold.

EINSON-FREEMAN, as lithographers, take neither back talk nor a back seat in the whole field of graphic arts.

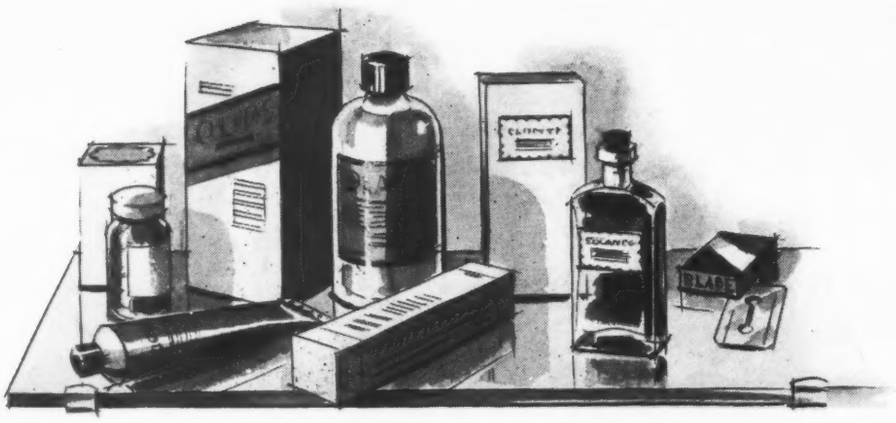
And as originators, developers of ideas for display material that can influence more dealers favorably, sell more goods more economically... Einson-Freeman has a niche all its own.

IF YOU ARE interested in getting increased advertising out of displays, a consultation with Einson-Freeman costs nothing but your time.

EINSON-FREEMAN CO. INC.

NEVER LACKADAISICAL LITHOGRAPHERS

Starr & Borden Avenues, Long Island City, N. Y.



Everyday or Once in a Lifetime

When the need comes for penicillin the price is never too high.
To be sure of quality protection
fine drugs like this are packaged with utmost care — right through to the Ridgelo Clay Coated Boxboard for the carton.
The same features of fine folding boxes
bring their sales value to
everyday drugs, tooth cleansers, powders, creams, lotions
and even pills.
Here, too, Ridgelo Clay Coated brilliance and richness
are first in eye appeal at very little added cost.
In *all* ways Ridgelo
leads to better carton printing and product attraction.

MADE AT RIDGEFIELD, N. J., BY LOWE PAPER COMPANY

Ridgelo CLAY COATED BOXBOARDS

REPRESENTATIVES:
H. B. Royce, Detroit • Norman A. Buist, Los Angeles • A. E. Kellogg, St. Louis • Philip Rudolph & Sons, Inc., Philadelphia

MIRROR FINISH

NEW shimmering acetate cards for S. O. Bigney Company's Mirror Finish Jewelry

For the first time here are jewelry cards of translucent high polish plastic to give a handsome product the background it deserves.

Congratulations to the S. O. Bigney Co. of Attleboro, Mass. for recognizing the merchandising value of shimmering acetate cards to mount their famous Mirror Finish Jewelry. And our thanks also to the Bigney Company for choosing Shaw-Randall to design and produce these plastic jewelry cards . . . permanently useful, washable and definitely sales appealing.

Shaw-Randall's success in the acetate packaging field is built upon this company's ability to make fine products look even finer.

SHAW-RANDALL COMPANY

DESIGNERS and CREATORS of VISIBLE PACKAGES

PAWTUCKET • RHODE ISLAND

A DIVISION OF SHAW PAPER BOX COMPANY

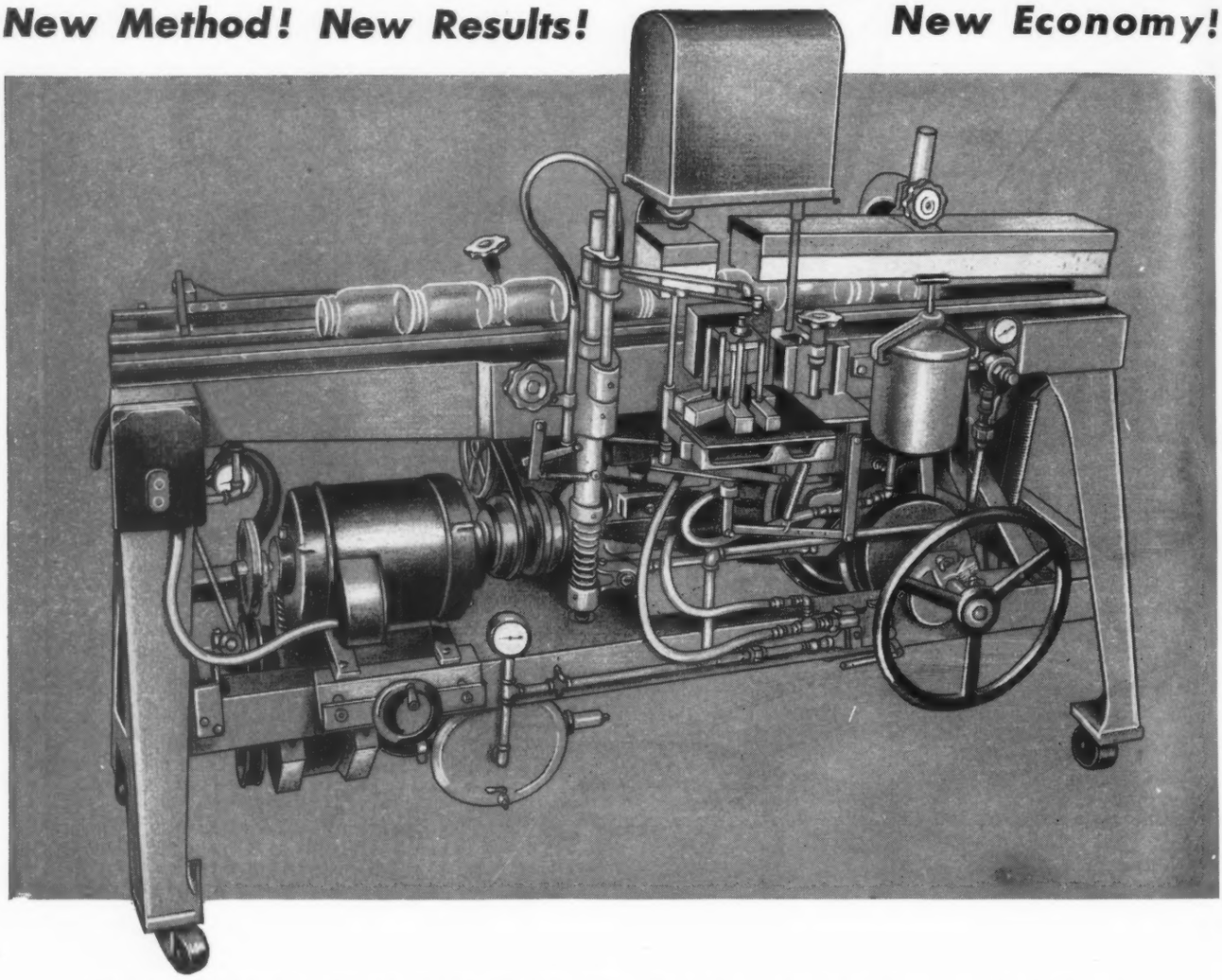
SALES REPRESENTATIVES

Fred Mann & Co., New York — H. B. W. Snelling, Boston — L. T. Swallow & Associates, Detroit

Introducing . . .

THE NEW VAC-SPRAY LABELING MACHINE

New Method! New Results! ***New Economy!***



The Label Chief is a Miracle Machine designed for modern methods of efficient operation.

The Label Chief is the ONLY labeling machine, *regardless of cost,* equipped to handle a wide variety of labels and containers without expensive extra attachments or stoppage of production lines for change-overs.

CHECK THESE ADVANTAGES:

The Label Chief applies gummed, ungummed, lithographed, embossed, varnished, or plain labels of any shape, from the size of a postage stamp up to five inches long or wide.

Containers to be labeled can vary from ½ ounce to gallon jug, of glass, metal, porcelain or cardboard . . . round, square, triangular or private mould.

Spray application and vacuum label pickup insure fast thorough attachment of labels. No hand-wiping of labels after emergence from labeler.

Lowers labor cost. Fewer operators needed with automatic operations of simple-to-master, long-lasting Label Chief.

Mounted on casters for easy movement. Increases efficiency with neater results.

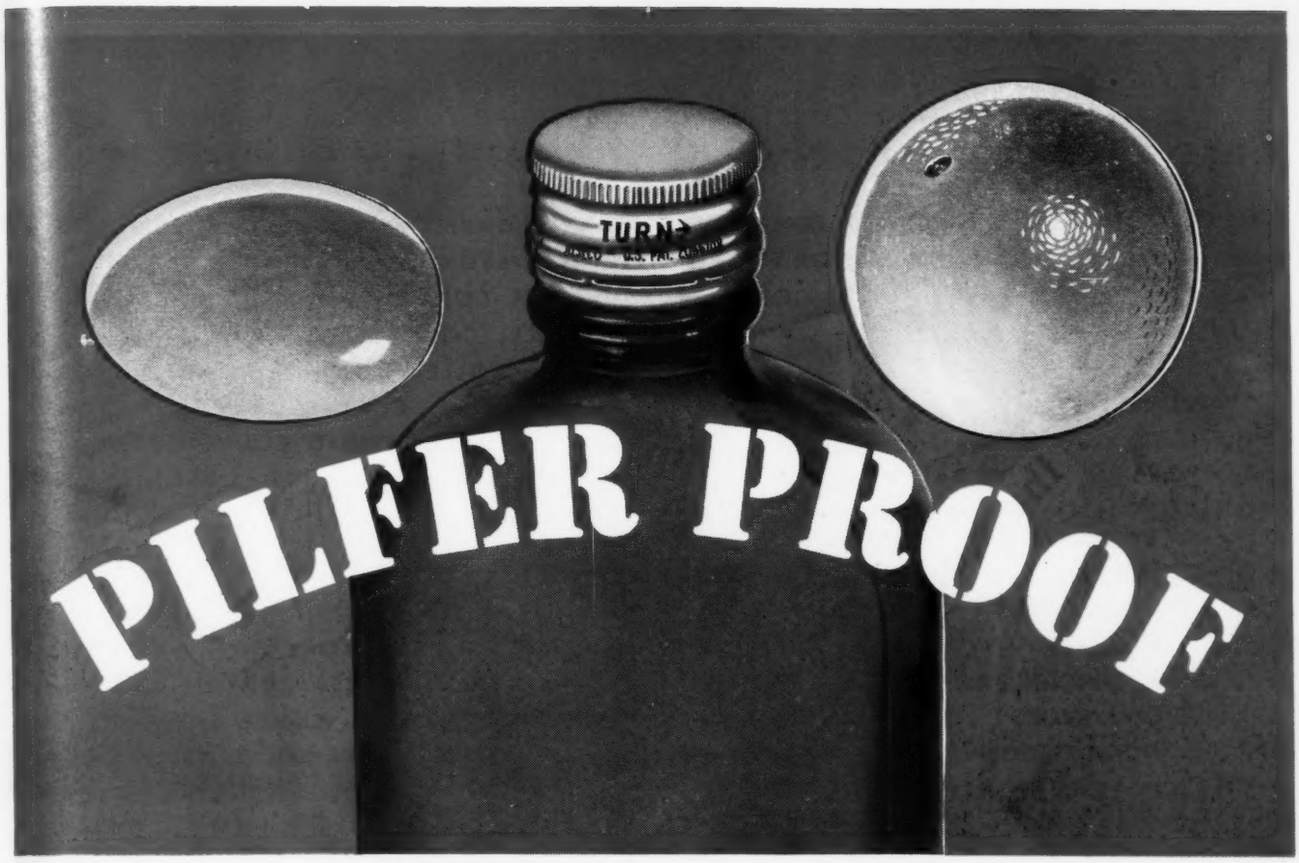
Approximately one minute required for change-over to different size, shape, or kind of label or container.

The Label Chief Saves Time! Saves Labor! Saves Equipment! Saves Money!

FAST DELIVERY ON ALL VAC-SPRAY MACHINES . . . WRITE FOR INFORMATION

VAC-SPRAY MACHINE CORPORATION

607 22nd AVENUE, N. E. MINNEAPOLIS, MINNESOTA



When you open an egg, an orange or an Alseco Pilfer-Proof Seal you can be sure that the contents haven't been adulterated or tampered with. Once this protective covering is broken, it can never be rejoined.

If nature didn't provide your product with a tamper-proof covering, investigate Pilfer-Proof Seals. When the cap is locked in place, your customer knows he is getting all the quality you put into the bottle. After unlocking, the cap may be used to reclose the bottle.

The Pilfer-Proof is one of many types and varieties of closures made by Alseco. Whatever your sealing problem, call on Alseco to work with you.

THE "CLICK" TELLS THE STORY

When an Alseco Pilfer-Proof Cap is turned, cap and locking ring separate with a "click", telling the customer that he has received the contents intact and undiluted.

ALSECO SEALS AND SEALING MACHINES

TAILOR MADE OF ALCOA ALUMINUM

ALUMINUM SEAL COMPANY • NEW KENSINGTON, PENNSYLVANIA

SUBSIDIARY OF ALUMINUM COMPANY OF AMERICA

SALES OFFICES IN LEADING CITIES

IS YOUR PRODUCT LISTED HERE?

(or if it is even remotely related)

ELECTRIC RANGES	GAS RANGES
DEEPFREEZE UNITS	REFRIGERATORS
WATER HEATERS	OFFICE DESKS
STEEL FILING CABINETS	BROOMS
WALLBOARD	MATTRESSES

Bemis' sturdy kraft paper covers get these and many other products to market with easy handling, low shipping charges, and ample protection.

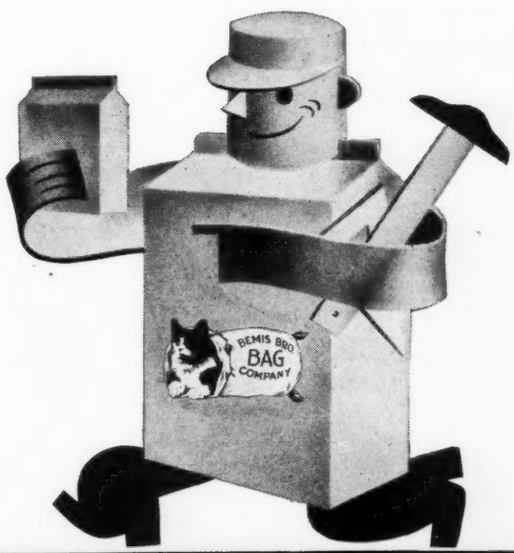
Bemis covers are slipped over the product in a jiffy to seal out dust and dirt. With this scuff-resistant cover, the product can be stored for months and be ready to go onto the display floor sparkling fresh at any time.

You can probably save substantial sums on shipping charges alone by talking with the Bemis Paper Bag Specialty Man.

BEMIS BRO. BAG CO.

PAPER BAG SPECIALTY DIVISION • 1054 South Vandeventer, St. Louis, Mo.

Then...see how BEMIS can serve you with Good Packaging at Low Cost



FILL OUT AND MAIL THIS COUPON TODAY

BEMIS BRO. BAG CO., Paper Bag Specialty Div.
1054 South Vandeventer, St. Louis, Mo.

How can Bemis help cut packaging costs for our products? We manufacture_____

*Name*_____

*Firm Name*_____

*Street*_____

*City*_____ *State*_____

ALL DRESSED UP AND READY TO GO

Your package or container has a job to do—taking your product to the market. That's why you want it all dressed up—in its best bib and tucker—to help meet competition. That's why you depend on colorful PALM FECHTELER decals to do a handsome dressup job quickly and economically.

Quickly—because PALM FECHTELER decals are made for speedy identity (without obscuring the contents of transparent containers). They are easily applied in your own plant as a part of production. No skilled labor is required.

Economically—because PALM FECHTELER decals are inexpensive, colorful and stay put on glass, ceramic and plastic surfaces. They are soil-proof, scuff-proof and alcohol-proof. They give individuality to the simplest, standardized container, thus reducing the need for a large or varied stock inventory.

PALM FECHTELER decals are produced to meet your package or container requirements—in any design or color. A trained staff of skilled artists is at your service to create your individual design. Complete line of decals for trucks, show cases, doors, windows or any spot that meets the eye. Samples and information on request.

PALM, FECHTELER & CO.

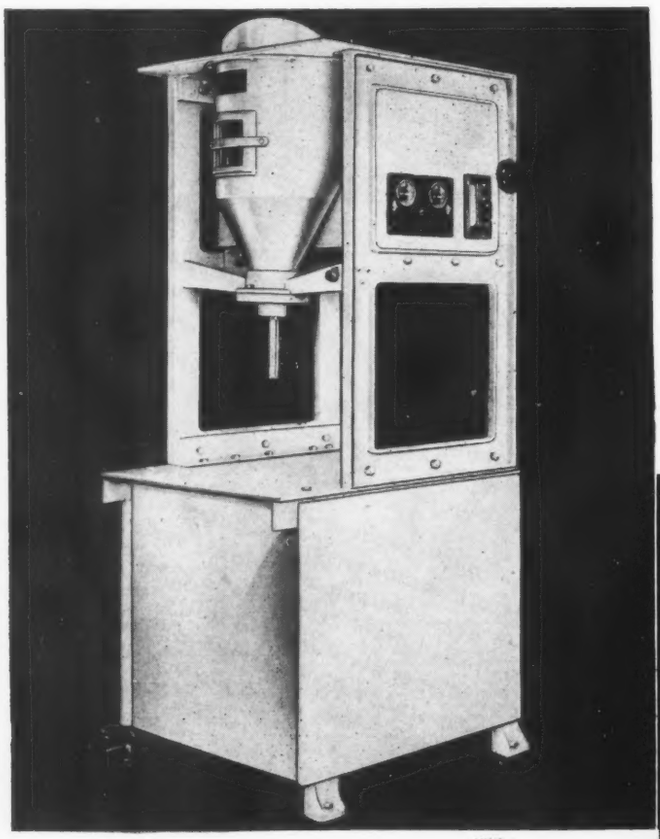
220 WEST 42nd STREET
NEW YORK 18, N. Y.

Creators of Quality Decalcomanias since 1856

RODGERS *Speeds-Up* PRODUCTION

WITH

THE PACKAGE FILLER



PATENT PENDING

Designed by Cragar, The Rodgers Augur Type Powder Filler will handle any package from 1/3 ounce to 10 lbs.

Simple dial adjustments, independently control package fill time and package transfer time.

Cams are completely eliminated. Minimum of mechanical linkage.

Send us a sample of your product and we will arrange a practical demonstration.

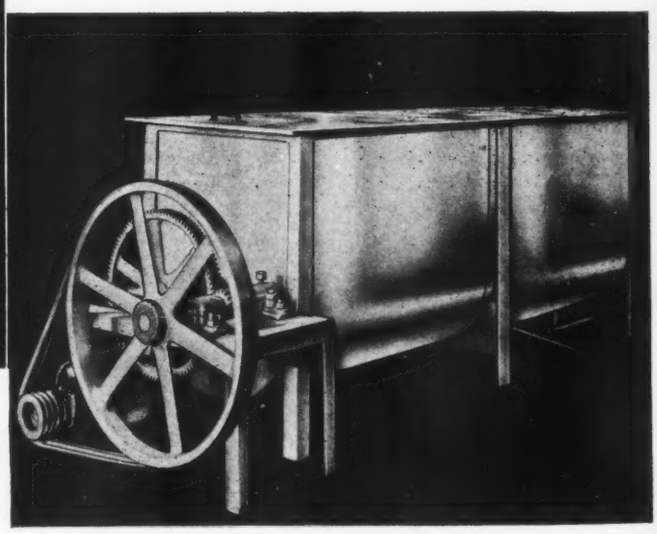
THE BATCH MIXER

The New Rodgers Batch Mixer is constructed in 7 different sizes to handle batches up to 400 lbs.

Simply designed to guarantee continuous operation. There are no rivets or bolts in the body to come loose.

Whether you want to mix 2 or 50 ingredients, the Rodgers Batch Mixer will do the job.

Supplied with or without direct connected motor.



We manufacture and distribute

- Carton Sealers
- Tube and Jar Fillers
- Tube Closures
- Tube Clips
- Stainless Steel Kettles
- Stainless Steel Tanks
- Pumps
- Conveyors
- Portable Electric Mixers

Rodgers Batch Mixers are presently in use in large and small plants. Easily demountable and self-cleaning, using less power, this machine will save you money.

Limited number for prompt delivery.

Our engineers are equipped to design many labor-saving devices in the packaging field. Your inquiries are solicited.

GEORGE G. RODGERS COMPANY, Inc.

225 WEST 34th STREET

BRyant 9-2040 NEW YORK 1, N. Y.

Hazel-Atlas Glass Containers have lost approximately 25% in weight during the last 6 or 7 years.

Result: Just as strong, easier to handle, better looking showcases and economy in shipping.

HAZEL-ATLAS GLASS COMPANY

Wheeling, West Virginia

GET MERCHAND(W)ISE!

Shoppers demand and the merchant knows that quality is back to stay. Your topnotch product will be assessed largely by the way it's dressed. Box wraps by Bobby—colorful—gay—assure you of "out front" display. For more merchand(w)ise suggestions call Bobby any day. He'll shed that apron, grab his bag and dash right out your way.

FOR CLARITY, COLOR AND CONSISTENT QUALITY

HAYNES LITHOGRAPH COMPANY, INC.

1140 East-West Highway **Silver Spring, Maryland**

NEW YORK OFFICE, 424 Madison Ave., Plaza 8-2740 • *ATLANTA OFFICE, 501 Hass-Howell Bldg., Cypress 4273*

BALTIMORE OFFICE, 1605 Court Square Bldg., Plaza 6074

Alcoa Aluminum Foil

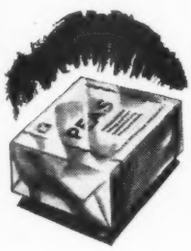
FOR TOMORROW'S PACKAGES

SPARKLING EYE-APPEAL

Eye-catching Alcoa Aluminum Foil lends itself to striking labels and packaging designs. It may be embossed or colorfully printed with transparent or opaque inks and lacquers.

FRIENDLY TO FOOD

Nontoxic aluminum is friendly to food. Wraps of Alcoa Foil impart no strange tastes or odors to the contents; provide protection against penetration by insects and mould spores.



MOISTUREPROOF, GASPROOF, GREASEPROOF

Aluminum foil has the lowest moisture-vapor-transmission rate of any of the flexible materials commonly used for packaging. It *locks in* flavor and freshness; prevents moisture, air, or gases from creeping in or out.

EASY TO FORM, FOLD, AND SEAL

Alcoa Aluminum Foil molds itself to the form of odd-shaped products, cuts down on dead-air space. It may be bonded to paper or synthetic sheets and is adaptable to all popular sealing methods for heat-seal coated materials. Dead folding qualities make it especially adaptable to high-speed packaging operations.

WITHSTANDS HEAT, COLD, AND TIME

Alcoa Aluminum Foil stands up under storage and climatic shipping hazards. It is unaffected by age and retains its dimensional stability at temperature extremes.

LIGHTPROOF

Products that deteriorate when exposed to light are protected behind the solid metal walls of aluminum foil. Its shining surface provides extra protection by reflecting radiant heat.

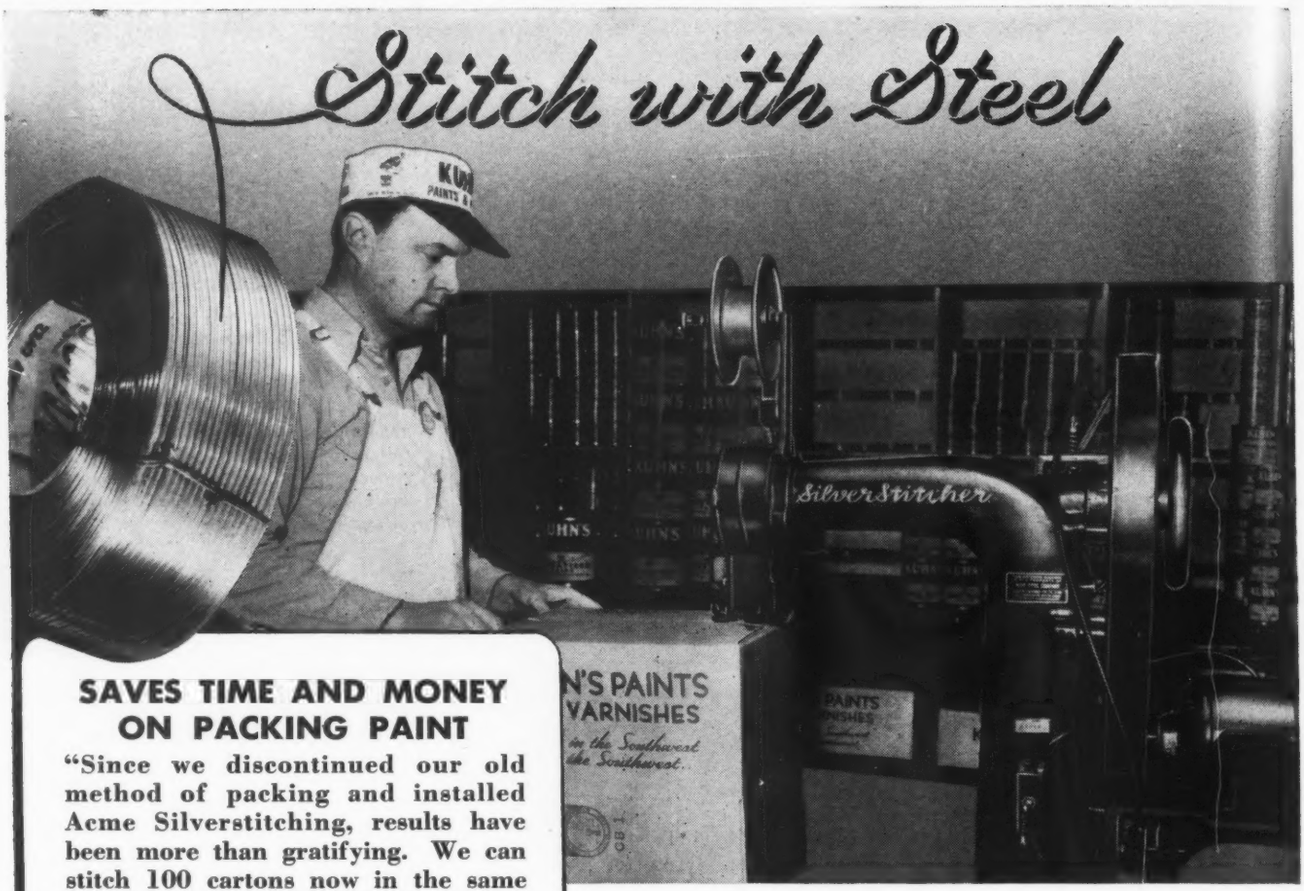
Do any of these advantages suggest ways to improve *your* packages or labels? The experience and facilities of leading package manufacturers are available to help you plan better packaging using Alcoa Aluminum Foil. For their names and addresses write to ALUMINUM COMPANY OF AMERICA, 2129 Gulf Building, Pittsburgh 19, Pennsylvania.

MORE people want
MORE aluminum for
MORE uses than ever

ALCOA

ALCOA ALUMINUM FOIL

THE QUALITY PACKAGING MATERIAL FOR QUALITY PRODUCTS



SAVES TIME AND MONEY ON PACKING PAINT

"Since we discontinued our old method of packing and installed Acme Silverstitching, results have been more than gratifying. We can stitch 100 cartons now in the same time it took to glue 50. Moreover, we've realized savings in labor and material of almost 30%!"

USE THE CLOSURE COMBINATION THAT

CUTS COSTS AS MUCH AS 30%

SilverStitch REG. U.S. PAT. OFF. — BOX STITCHING WIRE

- Always uniform in width and gauge
- Makes stronger, surer closures than other methods . . . unaffected by weather
- One-piece, continuous length, 5 and 10 pound coils . . . cuts threading time
- Galvanized to resist rust, corrosion

SilverStitchers REG. U.S. PAT. OFF. — BOX STITCHING MACHINES

- Operate easily, smoothly, quietly
- Heavy duty construction . . . low power consumption . . . for long thrifty service
- Few moving parts . . . vital ones reversible . . . for lower maintenance costs
- Adjustable, single pedal control

Sealing Shipping Containers by Stitching is Faster, Stronger and More Economical

ACME STEEL COMPANY

NEW YORK 7 · ATLANTA · CHICAGO 8 · LOS ANGELES 11

New-handy-complete sample book mailed this month to entire mailing list.

More copies available for wide-awake paper buyers who need the latest and best information.

Get on that mailing list!

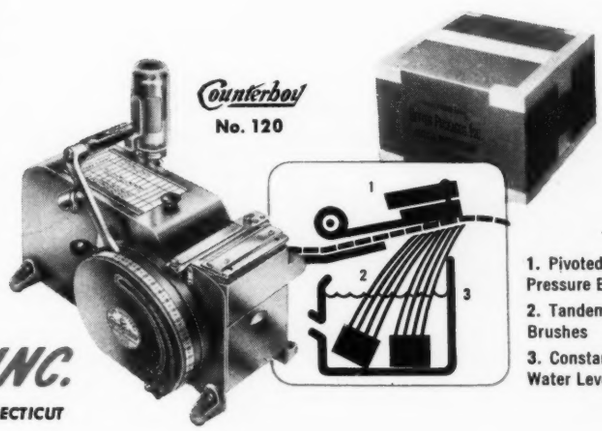
beware of "SPOTTY" MOISTENING

your prized package is no safer than the shipment seal!

"Spotty" Moistening
PACKAGE ENEMY NO. 1
Tape gets a lick and a promise

AUTOMATIC MOISTENING CONTROL, patented Counterboy feature, is your only sure protection against Package Enemy No. 1—"Spotty" Moistening. AMC assures correct moistening *every time*. The pivoted pressure bar can be pre-set for your type of tape. Because it's *pivoted*, it automatically maintains a steady, edge-to-edge contact between tape and tandem brushes. No fear of "Spotty" Moistening with *any* tape—*any* strip-length—*any* speed! You're always sure of fast, safe sealing with Counterboy AMC because correct "moistening judgment" is built right into your machine!

Write today for your copy of helpful new brochure, *"Better Shipment Sealing for Product Protection."*



Better Packages, INC.
WORLD'S LARGEST MANUFACTURERS OF TAPE DISPENSERS / SHELTON, CONNECTICUT

It's SYLVANIA® for Cellophane!

to protect cookies

and chops

and lemon drops!

Versatile Sylvania Cellophane protects all three—and many more! This shimmering wrap combines beauty with outstanding functional qualities. It protects against air, dust and moisture . . . seals flavor and freshness in.

Sylvania Cellophane today looks and protects better than ever before. Soon even larger quantities of this indispensable packaging material will be available for every requirement.

SYLVANIA CELLOPHANE

Made only by SYLVANIA DIVISION
AMERICAN VISCOSE CORPORATION
Manufacturers of cellophane and other cellulose products since 1929
General Sales Office: 122 E. 42nd Street, New York 17, N.Y. *Plant:* Fredericksburg, Va.

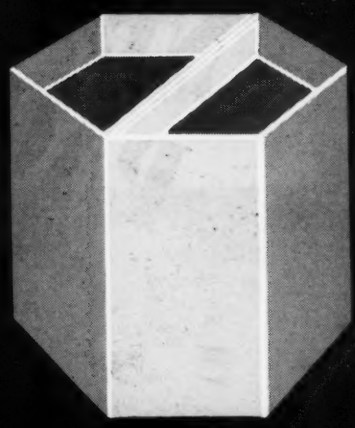
SYLVANIA® CELLOPHANE

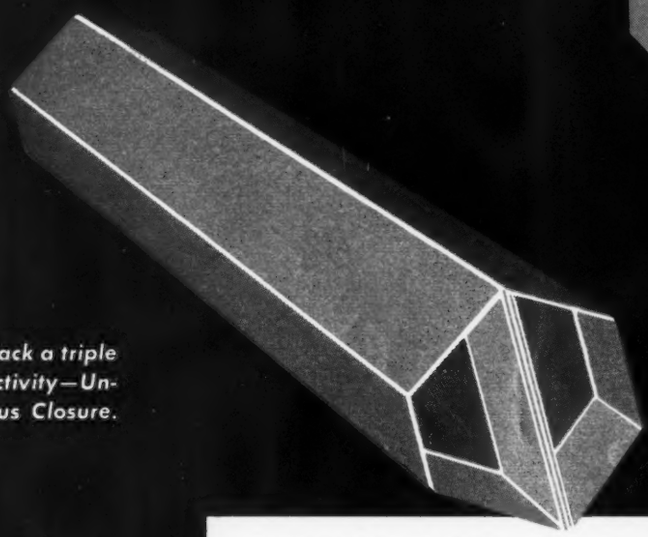
•Reg. Trade Mark

SIX ANGLES
of UNITED'S New
HEXAGON
CARTONS

1. *New Pressure Lock Closure**
2. *Unusual Strength and Rigidity*
3. *High Degree of Attention Value*
4. *Simple, Rapid Assembly*
5. *Adaptability to Hard-to-Package Products*
6. *Made of Board or Laminated Foil*

*Patent applied for.





Foil Hexagon Cartons pack a triple sales punch: High Reflectivity—Unusual Shape — Ingenious Closure.

Pressure Lock Closure fits *inside* the carton, adds strength, rigidity, protection. It is *part* of the carton, cannot get lost, fits snugly, always works. One flip of two fingers opens or closes the package.

Why didn't *I* think of this, you'll say when you see the ingenious *Pressure Lock Closure* of United's new Hexagon carton. It is so simple, yet it virtually triples the strength and rigidity of the carton, adds much to its appearance and greatly simplifies its handling. The hexagonal shape is not only attention-getting but practical for elongated, round, ball-shape, cylindrical and other hard-to-package items. Ask United how this new Hexagon carton can be adapted to your product—how it can speed up your packaging, distribution and sales.

UNITED PAPERBOARD CO.
INCORPORATED
285 Madison Avenue • New York 17, N. Y.

Board Mills:
Lockport, N. Y., Thomson, N. Y.; Urbana, O.

Carton Plants:
[illegible] N. Y. Syracuse, N. Y. Brooklyn, N. Y.; Cohoes, N. Y.; Springfield, O.

FROM PULP TO PACKAGE

EVERYTHING ★NEW in PACKAGING...

ALL in One Package!

Now, more than ever, it's vital to keep abreast of all the significant new machines, equipment, materials, ideas and techniques in the constantly developing field of packaging, packing and shipping. It's all available in one place and at one time at the 16th Packaging Exposition and concurrent Conference on Packaging, Packing and Shipping, sponsored by the American Management Association.

AMERICAN MANAGEMENT ASSOCIATION'S

PACKAGING EXPOSITION★

CONVENTION HALL, PHILADELPHIA

★ APRIL 8 • 11, 1947

METAL-CLAD SAFETY...SALES-MAKING SMARTNESS FOR YOUR "UNIT" PACKAGES

POSITIVE PROTECTION
for dehydrated foods, hygroscopic drugs and dry or oily chemicals in air-tight, light-proof, moisture-vapor-proof lamination of aluminum foil and acetate film. A permanent safeguard, especially for smaller units, where more protection is needed.

METALAM* Preserves Flavor and Quality for Any Product

SALES-BUILDING APPEARANCE
the transparent film forms a perfect surface for exceptionally attractive multicolor printing that speaks right out to potential buyers. Encourages self-service and effective display.

METALAM Gives Your Product That "Come and Get Me" Look

HIGH-SPEED HANDLING
because of Metalam's adaptability to modern automatic packaging equipment. Cuts down bulk, production costs and shipping weight.

METALAM Is Supplied in Rolls or Flat Bags

*Reg. U. S. Pat. Off.

Made under Pat. No. 2,220,849

"How-To-Do-It" Book
Write today for this illustrated booklet which fully describes the packaging magic of "METALAM" and offers suggestions on how it may solve your packaging problem.

● For "thirsty" products Metalam provides these extra values for profitable packaging. Or if cellophane, other films or coated papers, alone or in smart laminated combinations, are better suited to your needs, Dobeckmun will engineer a package to your specific requirements. Ask us for samples and practical suggestions.

THE DOBECKMUN COMPANY
CLEVELAND 1, OHIO

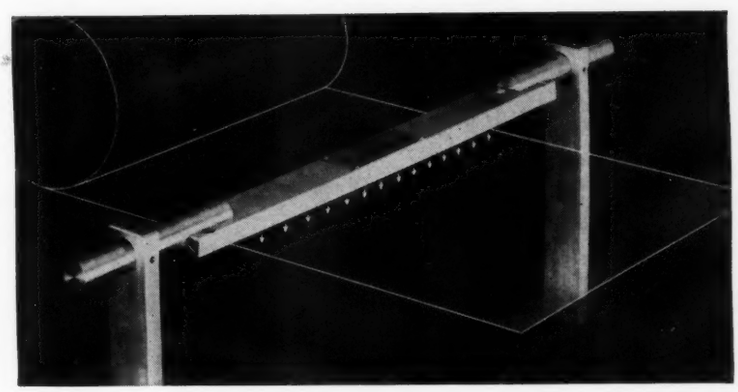
DOBECKMUN
Self-selling packages in processed films and foils

Branches in Boston, Chicago, Cincinnati, Los Angeles, New York, Philadelphia, San Francisco and Seattle. Representatives everywhere.

NOW... putting an end to static troubles...

...on these machines
wrapping
bag-making
envelope
winding—cutting—folding
coating
printing

...handling these materials
cellophane
glassine
cellulose acetate
tissue
wraps
paper stocks



The Ionotron employs a *new method* of eliminating static electricity—a unique method with exclusive, basic advantages. Continuous alpha radiation is provided by a radioactive source in a metallic bar of suitable shape and size for the specific equipment. The rays ionize the air in the critical zone. The ionized air "bleeds off" static charges before they can cause trouble. The Ionotron is continuously and permanently effective. No power connection is required, and there's no operating expense!

Interrupted production due to difficulties in handling static-charged stock . . . irregularities in finished products . . . fire and explosion hazards — all these are common problems in packaging operations where friction generates static electricity. But they need no longer eat into *your* profits, because the Ionotron Static Eliminator* — a new achievement of the U. S. Radium Corporation — has succeeded in eliminating many such static difficulties.

Whether you are a manufacturer or a user of packaging machinery, find out how the Ionotron can put an end to your static troubles. Send a description of your problem to *Dept. F6, U. S. Radium Corporation, 535 Pearl Street, New York 7, N. Y.*

*Trade-mark reg. applied for

U S RADIUM

IONOTRON
Static
ELIMINATOR

PUT YOUR BEST FOOD FORWARD WITH LUMARITH* FILM

Undercover for freshness protection . . . In plain sight for sales, is the new idea in fresh food packaging made possible with Lumarith transparent film.

Whatever the merchandising or distribution method—unit packaging at the source or unit packaging at the market—Lumarith plastic film gives absolute freshness protection to fruits, berries, vegetables, salad greens, dried fruits, meat and fowl.

Lumarith film wraps, bags and windows allow contents to breathe—to dispel carbon dioxide, and thus preserve freshness. Packed wet or moist Lumarith film won't "fog up" or grow limp.

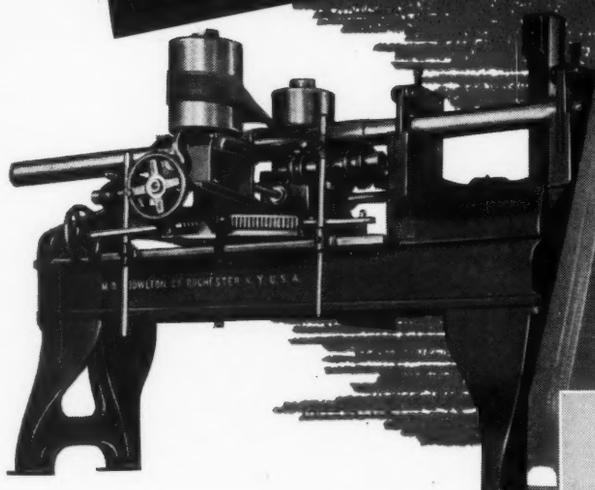
As a printing base for tradenames and product information, Lumarith film will give results equal to the finest coated paper. It does not dry out, become brittle or contract with age. Get in touch with the Transparent Films Department for specific and detailed information about this superb packaging film. Plastics division of Celanese Corporation of America, 180 Madison Avenue, New York 16, N. Y.

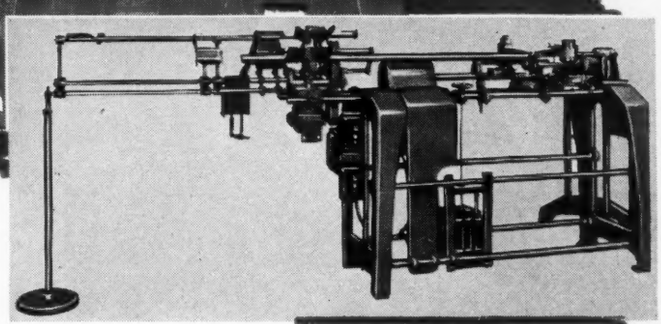
*Reg. U. S. Pat. Off.
†Trademark

Celanese *Plastics*

LUMARITH* FORTICEL* CELCON† CELLULOID* VIMLITE*

TUBE CONTAINERS MEET EVERY TEST





WHERE package performance demand is high, designers are turning to spiral wound paper tube containers. Strong, accurate, produced speedily and at low cost, they are unrivalled in adaptability. On the Knowlton #4 Spiral Winder, they may be coated or impregnated against moisture, odor and vermin without loss of production. Such tubes, in diameters of $^3/_4$" to 8" provide excellent packaging for foods, drugs, chemicals and countless other commodities.

Small, strong tubes in diameters $^1/_4$" to 1" afford perfect protection for such fragile articles as surgical and hygienic supplies, and sturdy cores for electrical coils and spools. Turned out accurately on the Knowlton #77 Spiral Tube Winder, they eliminate costlier materials, introduce high speed production. If you've a tough packaging problem to solve, bring it to Knowlton. We've solved hundreds.

BOSTON
637 Massachusetts Ave.
(ARLINGTON)

M. D. Knowlton COMPANY

BROOKLYN
45-53 Beaver St.

CHICAGO
9 S. Clinton St.

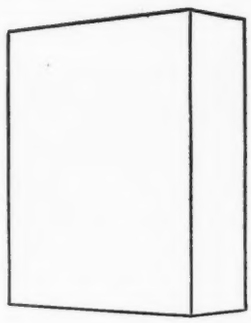
TORONTO, CAN.
260 Richmond St., W.

Pacific Coast Representatives
H. W. BRINTNALL CO.
Los Angeles, San Francisco, Seattle

ROCHESTER, NEW YORK

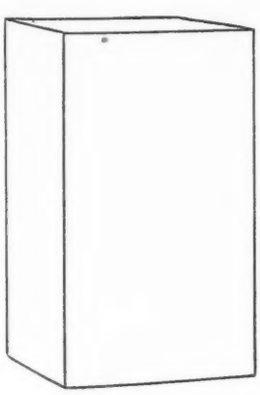

MORE EYES

Whiter. Brighter. Takes inks brilliantly. Coated Lithwite's smooth chalk-free surface takes plate impressions uniformly, brings up colors vividly. Rub-resisting. Fade-resisting. Easier to glue. Performance-proved for 8 years.



REACH FOR YOUR PRODUCT IN CARTONS OF COATED LITHWITE*

...THE QUALITY CLAY-COATED PAPERBOARD



What is it that makes cartons of *Coated* Lithwite stand out on shelves and counters? It's the stand-out *quality* of this famous clay-coated board. Made in one straight-through operation under the most exacting technical controls, *Coated* Lithwite comes from the machine with a coating of unvarying thickness and evenness. This finer, brighter board is the result of 8 years of Gardner-Richardson know-how in producing it. Teamed up with Gardner-Richardson carton craftsmanship, it means cartons of exceptional brilliance, crispness and display appeal. While production is currently sold up, why not let us show you, *now,* how *Coated* Lithwite offers a practical means of upgrading *your* cartons, as it has for so many mass merchandisers?

A product of THE GARDNER-RICHARDSON CO.

Manufacturers of Folding Cartons and Boxboard, Middletown, Ohio

*Reg. U.S. Pat. Off.

Sales Representatives in Boston, Chicago, Detroit, New York, Philadelphia, Pittsburgh, St. Louis.

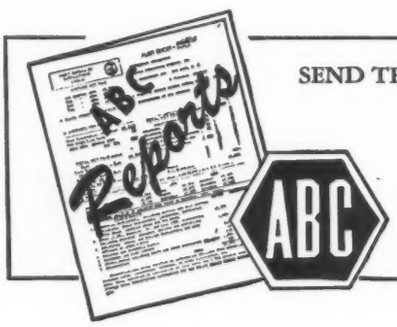
HOW TO KNOW
what happens to your advertising

WHAT do you think about when you receive your copy of a business paper that carries your advertisement? Are you reminded that you have an interest in every copy of that issue? Do you have to wonder, "Is it a good business investment?" —or do you know?

When you bought the space, did you use an A.B.C. report giving all the facts you should have about the distribution of the publication? How many people evidenced reader interest by paying for their copies? Did they pay the full price? What premiums, if any, were used as circulation inducements? How many get the publication free? Did you see an occupational or business breakdown of the circulation telling you how many are really prospects for your merchandise? How many subscriptions are in arrears? What is the renewal percentage? Where does the circulation go?

The answers to all these questions and more are given in the reports issued by the Audit Bureau of Circulations. A.B.C. reports are based on actual audits of publishers' records made by the Bureau's experienced circulation auditors. Always make A.B.C. reports your starting point in buying space. You know what happens to your advertising when you use A.B.C. reports.

This paper is a member of the Audit Bureau of Circulations. Ask us for a copy of our A.B.C. report and then study it.



SEND THE RIGHT MESSAGE TO THE RIGHT PEOPLE

Paid subscriptions and renewals, as defined by A.B.C. standards, indicate a reader audience that has responded to a publication's editorial appeal. With the interests of readers thus identified, it becomes possible to reach specialized groups effectively with specialized advertising appeals.

MODERN PACKAGING

ABC = *AUDIT BUREAU OF CIRCULATIONS* = *Facts as the Basic Yardstick of Advertising Value*

Mrs. Consumer, who buys three-fourths of the goods sold at retail, makes three-fourths of her decisions to buy *right at the point-of-sale*. The smart packaging that captures her eyes loosens her purse-strings. American Transparent creates packages that flatter your product, deliver on-the-spot sales. We are equipped to produce transparent boxes in any quantity—large or small . . . standard or customed . . . or dressed for gifting. Several stock jewelry boxes are now available for immediate delivery.

Let us do a selling job for you, through drama-packed presentations of your product. Consult us *now*, and prepare for packaged profits tomorrow!

American TRANSPARENT BOX CO., INC.

MANUFACTURERS OF *"Trans-Vue"* PATENTED CONSTRUCTION

REG. U. S. PAT. OFF.

PLANT:
1016-1018 Hamilton Street
Philadelphia, Pa.
POplar 5-8699

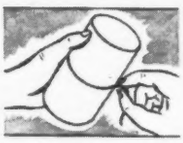
New York Representative:
P. PUCHKOFF & SONS
220 Kosciusko St., Brooklyn 16, N. Y.
NEvins 8-8100

FORTUNE SMILES ON *Sefton*

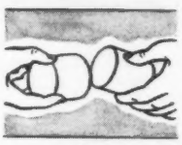
... for making such a successful ice cream package. Sefton makes a Fortune round seal package that this noted Memphis company proudly presents as "America's Ice Cream Package of Tomorrow." No idle boast, either, for this efficient string-opening can is a boon to the manufacturer and to its customers, too.

It's factory-sealed and tamper-proof. One pull of the center string and it's open, and easy to serve. Fortune, Inc., uses it with four colorful labels for different flavors.

ANOTHER EXAMPLE OF SUCCESSFUL *Sefton* PACKAGES



Press slightly with thumbs to complete break and pull ends apart.



Simply pull string and rip package all around.

Sefton
FIBRE CAN COMPANY
ST. LOUIS . . . . . NEW ORLEANS

DISTRICT OFFICES: • Los Angeles • San Francisco • Denver • Tampa • Chicago • Des Moines • New Orleans • Boston • Detroit • Kansas City • St. Paul • Omaha • New York • Cincinnati • Cleveland • Oklahoma City • Pittsburgh • Memphis • Nashville • Dallas • Houston • Salt Lake City • Seattle

MERRY CHRISTMAS

(1947 Style)

A lot of companies have already placed their Christmas container orders for the 1947 season. (Just a reminder — if you haven't — do it now.) Most of the orders placed show a decided preference for set-up boxes. In many cases, ordinary merchandise becomes a gift item, thanks to a box. There's a moral here, for your product can be a Christmas item all year round if packaged in a better selling set-up box. Consult your nearest National Paper Box Manufacturer* today and he will gladly show you the reasons why set-up boxes will better sell your products.

*Write today to Dept. 100, National Paper Box Manufacturers Association, Liberty Trust Building, Philadelphia 7, Pennsylvania, for Container information vital to your industry.

FOR INFORMATION OR SERVICE • CONSULT YOUR NEAREST SET-UP BOX MANUFACTURER

NATIONAL PAPER BOX MANUFACTURERS
Association
AND COOPERATING SUPPLIERS
Liberty Trust Building • Philadelphia 7, Penn.

TUPPER

Package with Tupper Millionaire Line

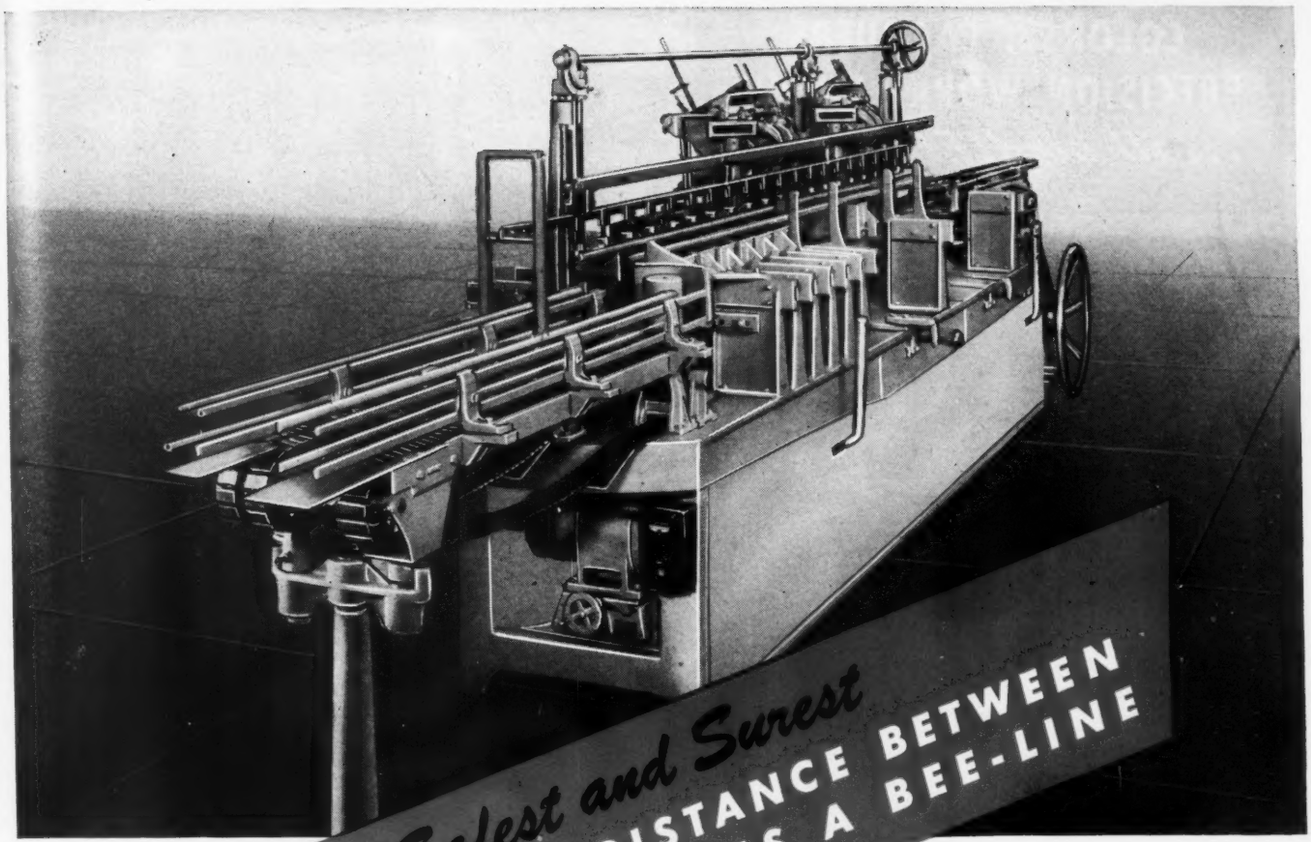
WONDER-BOWLS

AHEAD OF THE TIMES IN THE PACKAGING PARADE

For packaging all kinds of foods, nuts, candy, vegetables, and for many other items, these featherweight, breakproof Tupper Millionaire Line Wonder-Bowls are years ahead of time. Moulded in genuine Tupper Poly-T, the new plastic of the future, they are colorful and attractive at point of sale and quick favorites for scores ot uses in the kitchen, on the dinner table, for parties or picnics, for refrigerator or freezing unit. Wonder--Bowls are flexible, tasteless and non toxic. You can squeeze up the edges and pour from them in pitcher style. This packaging container of tomorrow is yours today, made to your specifications, if you like.

TUPPER PLASTICS, INC., Farnumsville, Mass.

New York City Office: 225 Fifth Ave. • Can. Address: Hindavid, Reg., 116 St. Paul St. W., Montreal, P. Q.



Safest and Surest
THE SHORTEST DISTANCE BETWEEN TWO POINTS . . . IS A BEE-LINE

The WORLD *BEE-LINE* Labeler belongs in your bottling line. When your product reaches that point you want no traffic jams, detours or collisions. You want to put it on a *BEE-LINE* to smooth, firm, precise application of front or front and back labels.

Each container is *led*, not pushed, gently through the complete operation; each receives *three*, not two, controlled pressure wiping applications. A new mechanical spotter assures accurate location of the label at an exact position on the container, if desired. The *BEE-LINE* sets a new standard of gentle, silky smooth action and convenience of operation.

The WORLD *BEE-LINE* Labeler is available for one-a-second or two-a-second production. Let us have samples of your labeled containers — round, square, flat, oval or panel, any size — so we can give you all the facts and figures.

WORLD LABELERS

"YOU GET THE BEST LABELERS IN THE WORLD"

ECONOMIC MACHINERY COMPANY

Builders of World Automatic and Semi-Automatic Labelers for Every Purpose

WORCESTER, MASSACHUSETTS

New York Philadelphia Pittsburgh Chicago San Francisco Denver
Louisville Salt Lake City El Paso Seattle Portland Phoenix London
Montreal Toronto Winnipeg Newfoundland Vancouver Mexico City
Sydney, Australia Wellington, N.Z. San Juan, P.R. Ciudad, Trujillo, D.R.

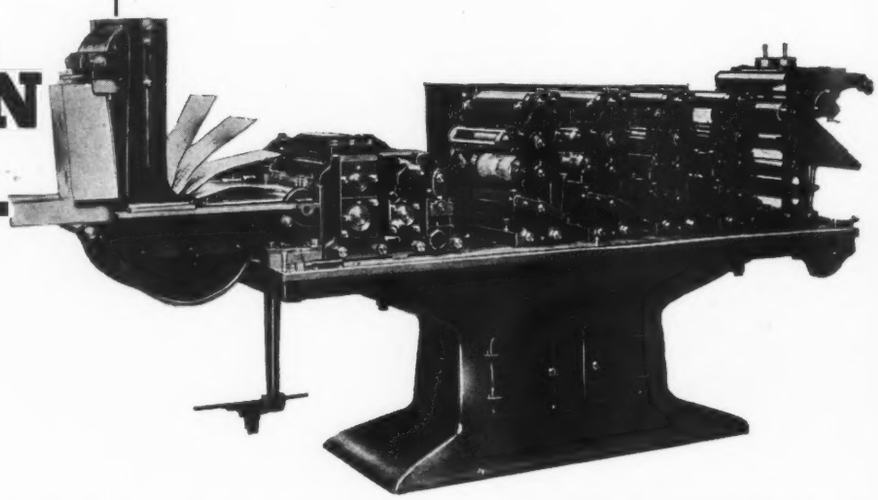
A GOOD DISPLAY PAYS DIVIDENDS

...in multiplied sales impressions

CASE HISTORY: This Upjohn Window Display was created by FORBES and distributed to drug stores throughout this country late in 1944. Now, over 2 years later, a continuing survey that is being conducted in 30 towns and cities in Rhode Island, Eastern Massachusetts and New Hampshire, showed this display again re-appearing in store windows in November, 1946. Further proof that dealers will save GOOD displays and exhibit them over and over again . . . another concrete example of the outstanding dealer acceptance and re-use accorded Forbes-created advertising display pieces.

THE PRESS that HANDLES ANYTHING . . .

THE
CHAMBON



This is No. 3 in a series of advertisements illustrating the Chambon Rotary Presses.

Yes, the Chambon Rotary Press prints on just about anything—from tissue and cellophane to 30-point board—offering precision production of gravure, offset, letterpress or a combination of these processes. And it prints a virtually unlimited number of colors. That's a big job. But the famous Chambon is designed to do these jobs because it is standard equipment capable of infinite variations according to your requirements.

The Chambon Press illustrated here is a letterpress machine equipped with a Rotary Scoring & Rotary Die Cutting Attachment and especially designed delivery to fit the specified need. It is capable of printing 4 colors on the face of the given material.

All Chambon Presses are custom-built to your needs and specifications—equipped for numbering, creasing, embossing, perforating, scoring, rotary or flat die-cutting, rotary or guillotine or sheet-cutting, rewinding, etc.

Chambon Presses are also famous for:

- **SIMPLICITY OF DESIGN**
- **INTERCHANGEABLE UNITS**
- **REDUCED PRODUCTION COSTS**
- **STRONG CONSTRUCTION**
- **CONSISTENT QUALITY OF WORK**
- **CUSTOM-BUILT TO YOUR SPECIFICATIONS**

L. CHAMBON CORPORATION

Custom Printing Presses

320 West 46th Street • New York 19, N. Y.

Chambon Rotary Printing Equipment from 7" to 28" (Aniline, Letterpress, Offset, Rotogravure) Diecutting, Sheetcutting or Rewinding Attachments; Slitters and Rewinders from Tissue to Cardboard; Laminating and Coating Attachments. Complete line of Converting Equipment for Cigarette Papers; Box-Printing and Forming Machines (Folding and Set-up).

They go well together . . . modern toiletries for men . . . and distinctive packaging by Warnercraft. Masculine and dashing . . . yet subtle for the feminine appeal as well . . . packaging by Warnercraft is for those whose products require the utmost in design and craftsmanship to win a market. Choose the best . . . choose Warnercraft.

WARNERCRAFT

"THE FINEST WORD IN PACKAGING"

THE WARNER BROTHERS COMPANY

Makers of set-up and folding boxes of all types, transparent acetate containers, hand made specialties, counter displays and dispensers.
Main Office and Factory: 325 Lafayette Street, Bridgeport 1, Conn. • New York Sales Office: 200 Madison Avenue, New York 16, N. Y.

TRANSPARENT PACKAGE *by Traver* . . .

TOMATOES

Delicate pinks or luscious, ripe reds radiate sales-appeal through Traver transparent packages. These eye-catching overwraps formed from Traver's expertly printed roll or sheet stock retain the glossy smoothness so necessary to an attractive consumer package.

The Atomic brand of Levy & Zentner has added power with Traver overwraps.

Crivella's "Select Pack" tells the story —smooth transparency of Traver packages allows selection of perfection.

Each tomato is clearly visible beneath Traver's carefully printed sales label No distracting wrinkles or smudges

WRITE OR WIRE—DEPT. M

Traver CORPORATION

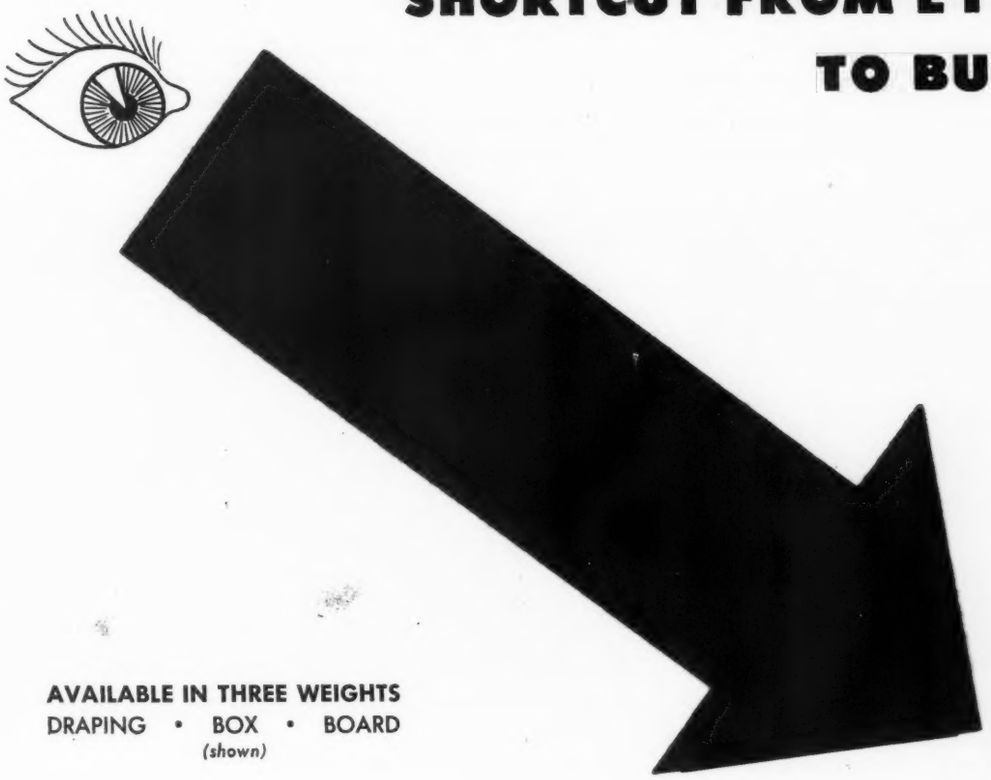
Photos show Traver transparent sales packages in actual use.

358 W. ONTARIO STREET • CHICAGO 10, ILLINOIS

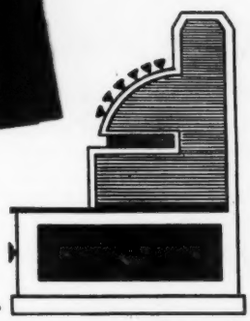
CONVERTERS AND PRINTERS OF CELLOPHANE, PLASTICS, ACETATES, FOIL AND GLASSINE

Velourshеen

SHORTCUT FROM EYEING TO BUYING



AVAILABLE IN THREE WEIGHTS
DRAPING • BOX • BOARD
(shown)



20 SALES-TESTED COLORS
RANGING FROM SOFT
PASTELS TO DARK SHADES

An outstanding package is the shortest route from the prospect's eye to the purchaser's pocket. Every sales and packaging executive knows this. That's why Velourshеen, a truly outstanding packaging material, is hailed as one of the greatest recent hits in the packaging field.

The sales-tested colors and unusual appearance of Velourshеen attract instant attention. Its unique "touch appeal" holds interest. Thus, combining the most persuasive qualities of the ideal packaging material, Velourshеen can make a bestseller from almost any gift, novelty or luxury-type merchandise.

Write for Samples

BULKLEY, DUNTON & CO.
INCORPORATED
295 MADISON AVENUE, NEW YORK 17, N. Y.
BOSTON 10, 143 Federal St. • CHICAGO 16, 2635 S. Wabash Ave.
LOS ANGELES 13, 124 W. 4th St.

THE BACTERIOLOGICAL LABORATORY

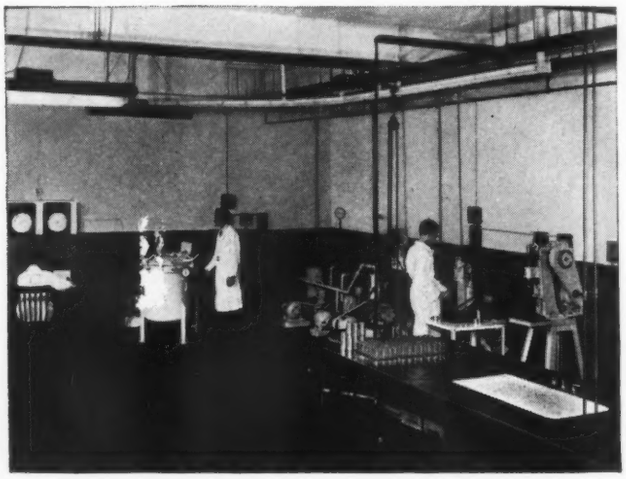
The services and facilities of Anchor Hocking's modern and completely equipped Bacteriological Laboratory are available to all glass packers in determining and correcting the causes of food spoilage and in solving problems of sterilization, processing, fermentation, heat penetration times and other problems of a similar nature.

THE CHEMICAL LABORATORY

The chemical characteristics of many foods require careful study to preserve their color, nutritional and vitamin values. Anchor Hocking chemists determine and recommend the most effective way to retain these values; which coatings, which liners, and which of Anchor Hocking's many styles of closures is the best to use.

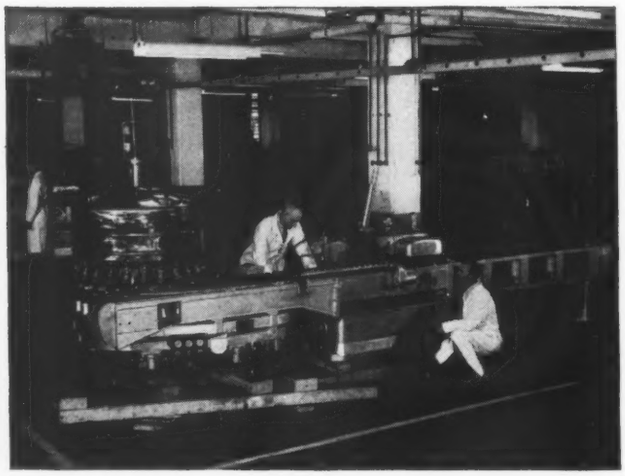
THE ENGINEERING DEPARTMENT

This department designs, develops and perfects new closures and sealing machines and is constantly striving to improve existing types. The watchdog of Anchor Hocking quality, it specifies raw materials, tests and controls them, supervises all manufacturing processes, and is otherwise available to customers in developing an efficient production line.



THE EXPERIMENTAL PACKAGING DIVISION

By duplicating actual working conditions under scientific control, Anchor Hocking's Experimental Packaging Division, which simulates a modern glass packaging pilot plant, determines and recommends the most satisfactory, the most modern and the most scientific methods for preparing and packing foods of all kinds in glass.



THE PACKAGE ENGINEERING DEPARTMENT

The function of this department is to cooperate with customers and manufacturers of conveyors, unscramblers, washers, filling machines, processing equipment, labelers, bottle packers, casers, carton sealers and other equipment, in studying special packing conditions and in engineering, integrating and setting up the most efficient and economical production methods and routines.

THE PACKAGE DESIGN DEPARTMENT

Anchor Hocking provides a package design service to its customers to assist in modernizing the package appearance so it will be more easily seen and readily purchased. It will help select or design the container most convenient and best adapted to the product and its ultimate use. In addition this department is available to develop attractive designs for labels and closures.

THIS IS ALL YOURS!

The Package Engineering and Research Division is an important part of Anchor Hocking's *complete* packaging service

SHOWN here are facilities of Anchor Hocking's Package Engineering and Research Laboratories, created especially to help you achieve a more efficient, more economical, faster and more profitable glass packaging operation.

Here engineers and trained technicians are available to assist in solving your individual packaging problems; in engineering, integrating and setting up the most efficient and economical production methods and routines.

Here Anchor Hocking bacteriologists and chemists are ready to supply you with exact knowledge based on scientific facts about your individual products and the variable factors that effect them . . . to check, test and advise on the proper preparation, handling, packing, sealing, sterilizing and processing of your food products.

All these and more *plus* services are yours free of charge for the asking. Add to these a complete line of glass containers for every packaging need—a complete line of airtight and vacuum closures for every sealing need *plus* a wide range of sealing machines that will apply 50 to 500 caps a minute with an airtight, steam or mechanical vacuum seal and you have a packaging service that is as unique as it is complete. For help or information in connection with any phase of packaging in glass either write us direct or call your nearest Anchor Hocking representative.

Anchor
CONTAINERS and CAPS

PRODUCTS OF
ANCHOR HOCKING GLASS CORPORATION
LANCASTER, OHIO

TUNE IN "CRIME PHOTOGRAPHER" EVERY THURSDAY EVENING, ENTIRE COAST-TO-COAST NETWORK, CBS

You get a balanced package . . .

with Du Pont Cellophane

The *right* merchandising advantages . . . the *right* protective advantages . . . at the *right* cost. It's this balance that makes a package truly effective.

The transparency of Du Pont Cellophane makes a product rank high from a merchandising standpoint. It becomes its own salesman. It's eye-attracting . . . and eye-convincing.

This package also gives the product the protection it needs. Sanitary protection against handling and soilage . . . moistureproof protection against spoilage.

It's the right packaging material from the cost angle! . . . Transparency plus protection *at lowest cost.*

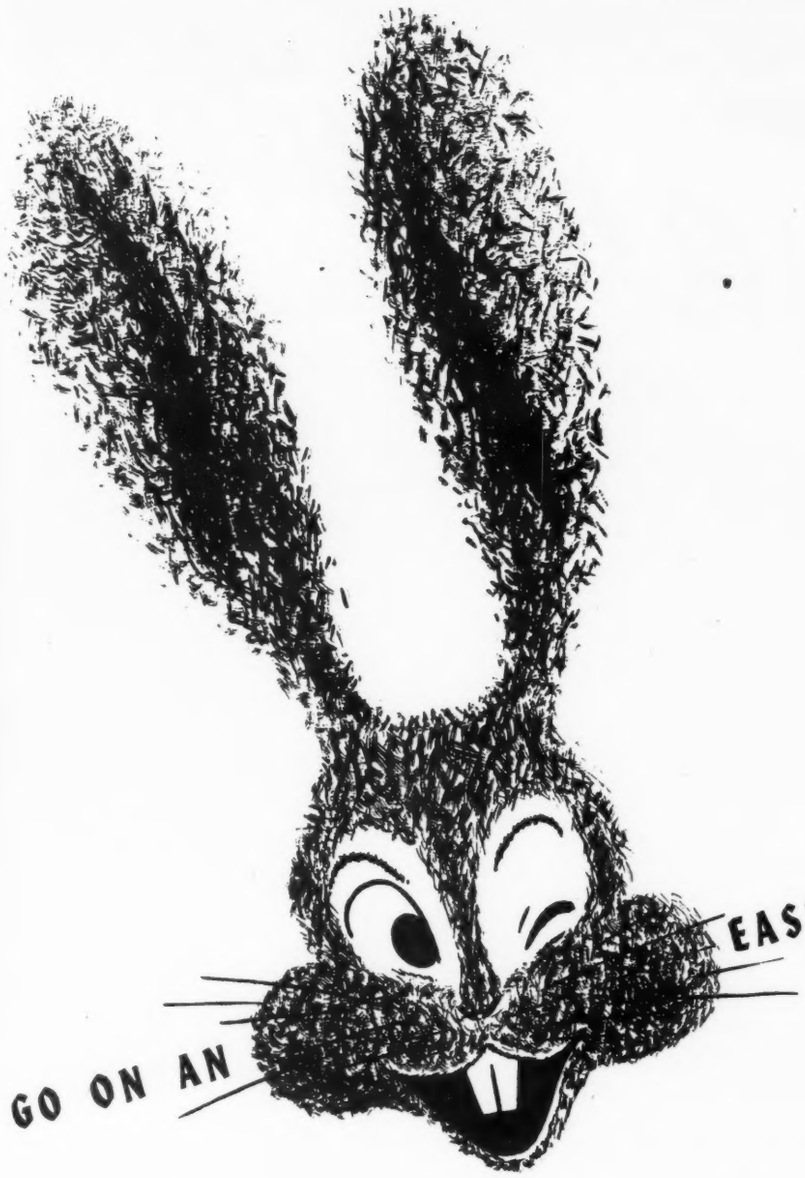
Although the demand for Du Pont Cellophane still exceeds the supply, we hope the day is now not far off when there will be enough to enable converters and ourselves to meet all needs. In the meantime, let us work with you on your future packaging plans. E. I. du Pont de Nemours & Co. (Inc.), Cellophane Division, Wilmington 98, Delaware.

DU PONT
REG. U. S. PAT. OFF.

Cellophane

Shows what it Protects—at Low Cost

BETTER THINGS FOR BETTER LIVING
...THROUGH CHEMISTRY



GO ON AN EASTER SELLING SPREE

IN KUPFER NOVELTY PAPERS

FOIL AND METALLIC PAPERS • LACE PATTERNS
LEATHER SIMULATIONS • FLORAL PRINTS
TRADE-MARKED PAPERS • OVER 5000 OTHER PAPERS

Plan your Easter packaging *NOW* with Kupfer papers, refreshingly new and appropriate for the entire spring season. Colorful, stimulating printed or embossed papers, exclusively Kupfer's, are ready for selection for box coverings, linings, package wraps, labels, etc. If desired, Kupfer packaging specialists will create a paper for your specific needs.

COLOR SELLS

KUPFER BROS. CO. 4 ASTOR PL. NEW YORK 3, N. Y.

Manufacturers of Surface Coated Papers Since 1845

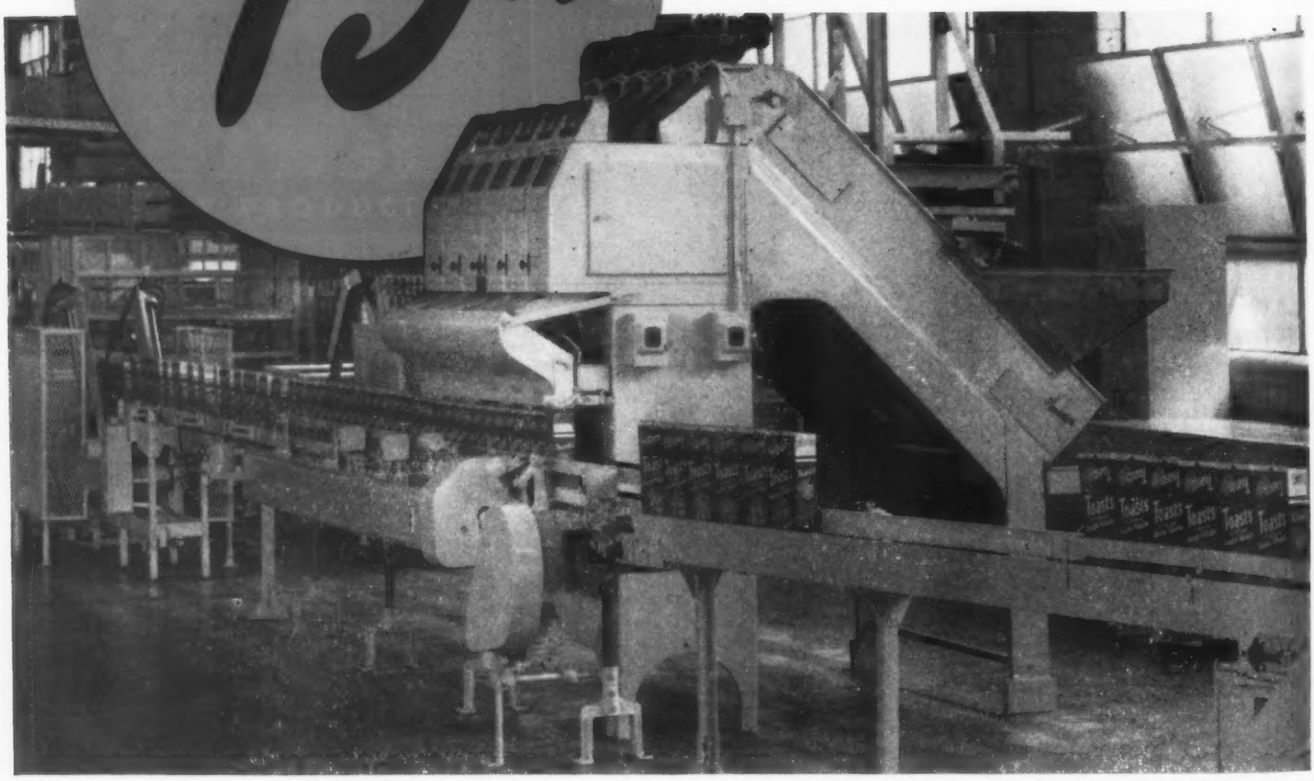
KUPFER BROS. PAPER CO.
145 West Hubbard Street
Chicago 10
Illinois

MODERN PACKAGINGS
Irwin-Keasler Building
Dallas 1, Texas
Southwest Representative:

FRYE-NEWMARK PAPER CO.
1328 Santa Fe Avenue
Los Angeles
California

Branches in:
BOSTON•RICHMOND
PHILADELPHIA
SEATTLE
SAN FRANCISCO

75 a minute... and accurate!



...with the TRIANGLE ELEC-TRI-LINE

The new Triangle Elec-Tri-Line System illustrated is automatically weighing and filling crackers into cartons at a rate of 75 packages per minute with accuracies as close as plus or minus one cracker! Despite its high speed this equipment handles delicate products without breakage.

Various models are available to weigh and fill as much as 5 lbs. or as little as ¾ oz. accurately. Production ranges from 10 or 15 per minute in semi-automatic models to as high as 120 per minute on machines with synchronized automatic conveyors as illustrated. Typical products handled include crackers, cookies, biscuits, pretzels, popped corn, macaroni products, coffee, cranberries, dried foods, candies, nuts and nut meats and many other items.

For *precision weighing at lowest possible cost,* here's the answer! Write for descriptive literature.

Features:

2-in-1 Electrically Vibrated Feed Plates—gentle handling

Power-rotated Weigh Buckets—accurate, positive

Acro-meter Weight Adjustment—operative without stopping machine

Visible Weighing—You can see the weights!

Dial Control of Feeding—regulates speed

Simplified Scale Mechanism—anyone can set it

Streamlined, Enclosed—protected and clean

Screening Device—takes out fine particles

TRIANGLE PACKAGE MACHINERY CO.

907 N. SPAULDING AVENUE, CHICAGO

There's no longer any need for women to be victims of the "onion in the eye" school of cooking . . . not with Ivanhoe Teaspoon Onions handy on the pantry shelf. No more tears . . . no more scented hands . . . no more kitchen odors . . . just genuine onion flavor.

Crown Screw Caps, attractively lithographed in three colors, have been selected by the manufacturers, Ivanhoe Foods, Inc., of Auburn, N. Y., as a closure for this product. Perfect, bright-finish tinplating, patented sealing ring material and exclusive Deep Hook Thread construction give Crown Screw Caps exceptional sealing qualities. Crown Cork & Seal Co., Baltimore 3, Md.

World's Largest Makers of Metal Closures.

CROWN CLOSURES

Craftsmanship

NOBLE

ESTABLISHED 1876

Manufacturers of

JEWELERS' FINDINGS AND SOLDERS

PRESENTATION BOXES

TROPHIES • MEDALS • BALL CHARMS

F. H. NOBLE & COMPANY 559 West 59th Street Chicago 21, Illinois

There is nothing
quite so fine

STERLING SILVER

ALUMINUM FOIL

Science knows no frontiers. This explains the basic, revolutionary improvements in the machines and processes employed by us . . . . . to produce a foil with interesting advantages to all users.

COCHRAN FOIL COMPANY, INC., LOUISVILLE 10, KENTUCKY

SEE THIS FIRST DISPLAY

MAKE YOUR OWN BAGS!

Kono-Mead

HIGH SPEED
BAG-MAKING MACHINES

We are now exhibiting at our Flushing, L. I. headquarters the amazing high-speed electronically controlled bag-making machines which produce heat-sealed bags with glue reinforcements at the rate of 5,000 to 12,000 bags per hour—with only one operator!

NOW READY FOR DELIVERY

These high-output, low-cost bag-makers are coming off the assembly line daily. Come and see them in operation. If you wish, you may place your order at the exhibit.

KONO-MEAD EQUIPMENT CORPORATION

133-23 35th AVENUE • FLUSHING, LONG ISLAND, N. Y. • TEL. FL. 3-8113

Rhapsody in Blue Ribbons

For the fifth year in a row, the Rossotti organization wins a blue ribbon for package design. The Symon's tea carton was unanimously chosen by three distinguished judges as the best all-round package . . . the only winner in its classification.

Tea or tomatoes . . . spaghetti, spinach or sausage . . . no matter what your product may be, the dynamic eye—and buy—appeal of Rossotti-designed labels and cartons will *speed* your product from the shelf to the home.

If you are thinking of a new package—or revising an old one—come to the Rossotti Packaging Consultants.

Rossotti
SINCE 1898

ROSSOTTI LITHOGRAPHING CO., INC. • NORTH BERGEN, N. J.

BOSTON 9, Mass.: 200 Milk Street • ROCHESTER 4, N. Y.: 183 Main Street, East
JACKSONVILLE 9, Fla.: 6503 Sapphire Drive • CHICAGO 11, Ill.: 520 N. Michigan Ave.
WEST COAST PLANT: 5700 Third Street, San Francisco 24, Cal.

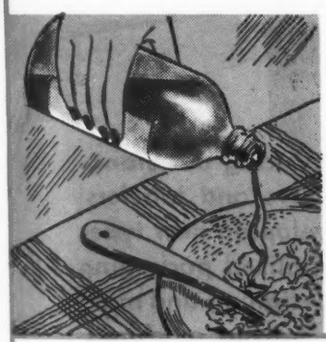
FOR SALAD AND COOKING OILS...

WOMEN PREFER GLASS CONTAINERS 4 TO 1

Housewives prefer a container that shows how much they have left!

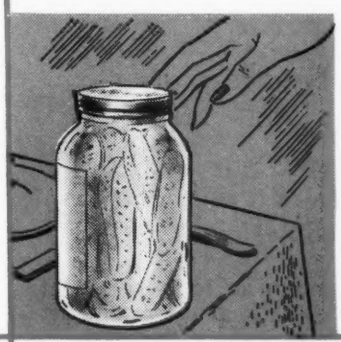
Their emphatic vote for salad and cooking oils in glass is but one example of sweeping preferences for glassed foods as indicated in national surveys of representative products* by a well-known public opinion analyst.**

The trend is to glass for modern packaging because of these basic glass advantages:



CONVENIENCE:

The time and work-saving advantages are largely responsible for such votes as the 4 to 1 preference for salad or cooking oil in glass. Easy to pour. Easy to clean. No waste.

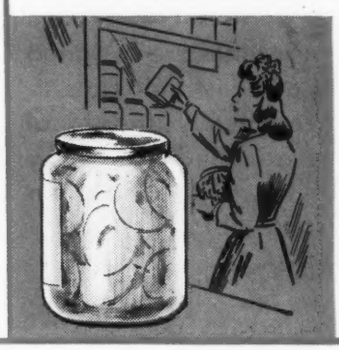


ATTRACTIVENESS:

Shiny glass containers are so attractive that many of them (for salad dressings, pickles, preserves, etc.) are placed right on the table.

PROTECTION:

Coffee, for one example, is delivered at the peak of freshness, and the Ultra-Vac jar may be resealed after each use.



VISIBILITY:

A glass container invites product inspection. Color, amount and condition are on display. Luscious, glassed fruits catch the eye of a customer who is "looking for a delicious dessert"!

The popularity of glass containers is growing . . . growing because their many advantages are basic. You sell more—need less selling time with products packed in glass—in Duraglas Containers!

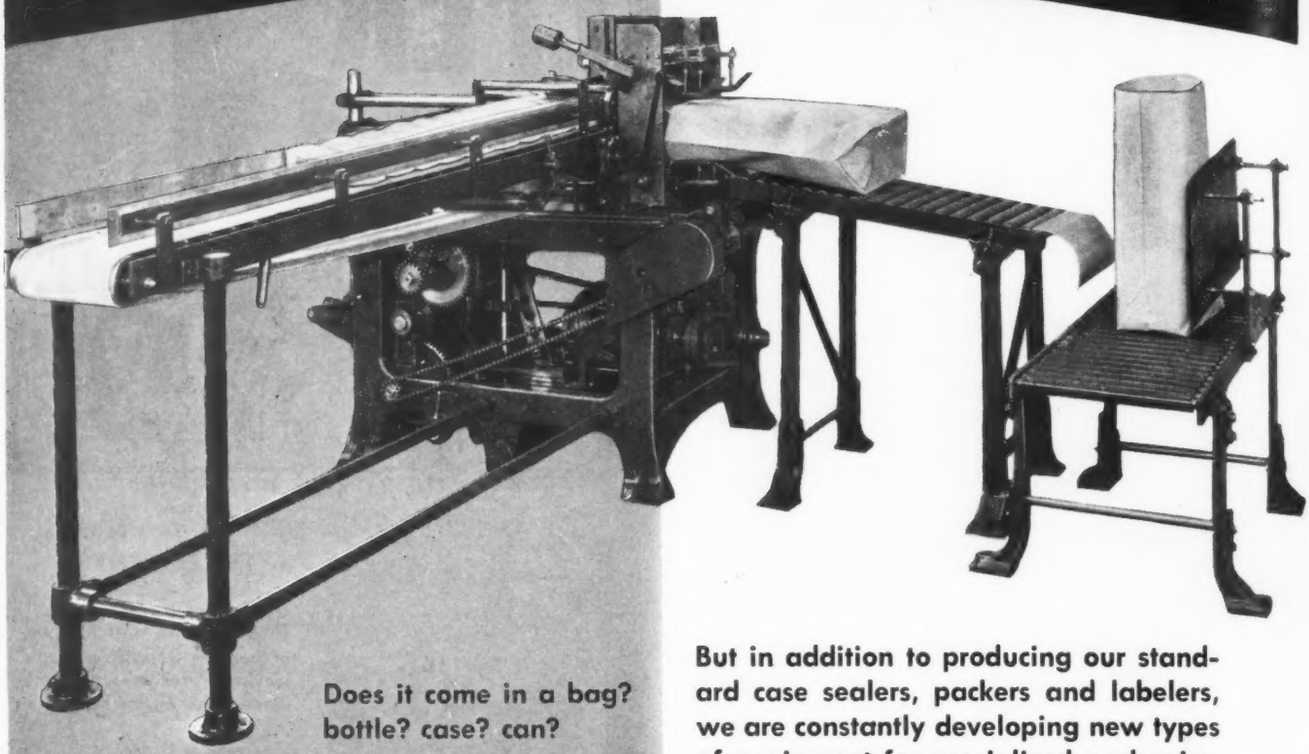
**Average is based on eight key classifications: pears, peaches, fruit salad and cocktail, baby food, coffee, salad or cooking oil, beets, food-beverages.*
***Name supplied on request.*

ESPECIALLY IN Duraglas CONTAINERS

TRADE MARK REG. U. S. PAT. OFF.

OWENS-ILLINOIS GLASS COMPANY · TOLEDO 1, OHIO · *Branches in Principal Cities*

STANDARD-KNAPP "WRAPS IT UP!"



Does it come in a bag? bottle? case? can?

We can make a machine to package it.

Standard-Knapp's standard-for-quality bag packers, bottle packers, case sealers and can labelling machines are designed expertly and built of finest materials to give automatic, completely functional performance. They are used in leading plants of most of the high production packaging industries throughout the country.

But in addition to producing our standard case sealers, packers and labelers, we are constantly developing new types of equipment for specialized packaging purposes, constantly designing and making variations of our proved machines.

Standard-Knapp "wraps it up" for the sugar industry, for the beer, cigarettes, household products and canned soup industries. If you have some new packaging operation requiring a new design to handle it, get in touch with us.

Let Standard-Knapp "wrap it up" for you.

Standard-Knapp Corp.

MANUFACTURERS OF CASE SEALING, CASE PACKAGING AND CAN LABELING MACHINES
FACTORY and GENERAL OFFICES—PORTLAND, CONNECTICUT

570 Lexington Avenue, NEW YORK 22, N. Y.
221 North La Salle St., CHICAGO 1, ILL.
145 Public Square, CLEVELAND 14, OHIO
300 Seventh Street, SAN FRANCISCO 3, CALIF.
420 S. San Pedro Street, LOS ANGELES 13, CALIF.
3224 Western Avenue, SEATTLE 99, WASH.
1208 S. W. Yamhill Street, PORTLAND 5, OREGON
349-350 Paul Brown Bldg., ST. LOUIS 1, MO.
6 Radcliffe Rd., ALLSTON 34 (Boston), Mass.
Windsor House, Victoria St., LONDON S.W. 1, ENG.

WINNER!

This DON-DE COFFEE shipping container won the decision of a distinguished committee* of judges for a Blue Ribbon Award in Spice Mill's 10th Annual Food Packaging Show.

Earlier in the year a SAVEX carton produced by us for the Climalene Company won a similar decision in a competition sponsored by the Folding Paper Box Association.

It is the business of PLANNED PACKAGING to produce cartons and containers which make a winning impression wherever they are seen. One of the big reasons why they do this so effectively is because PLANNED PACKAGING is a complete coordinated service. It includes research, design, testing, manufacture of board, and conversion. It provides the answer to your complete range of packaging requirements.

*Spice Mill's committee of judges included Walter Dorwin Teague, industrial designer; Richard F. Bach, Dean of Education and Extension of the Metropolitan Museum of Art; and Clementine Paddleford, food editor of the New York Herald-Tribune.

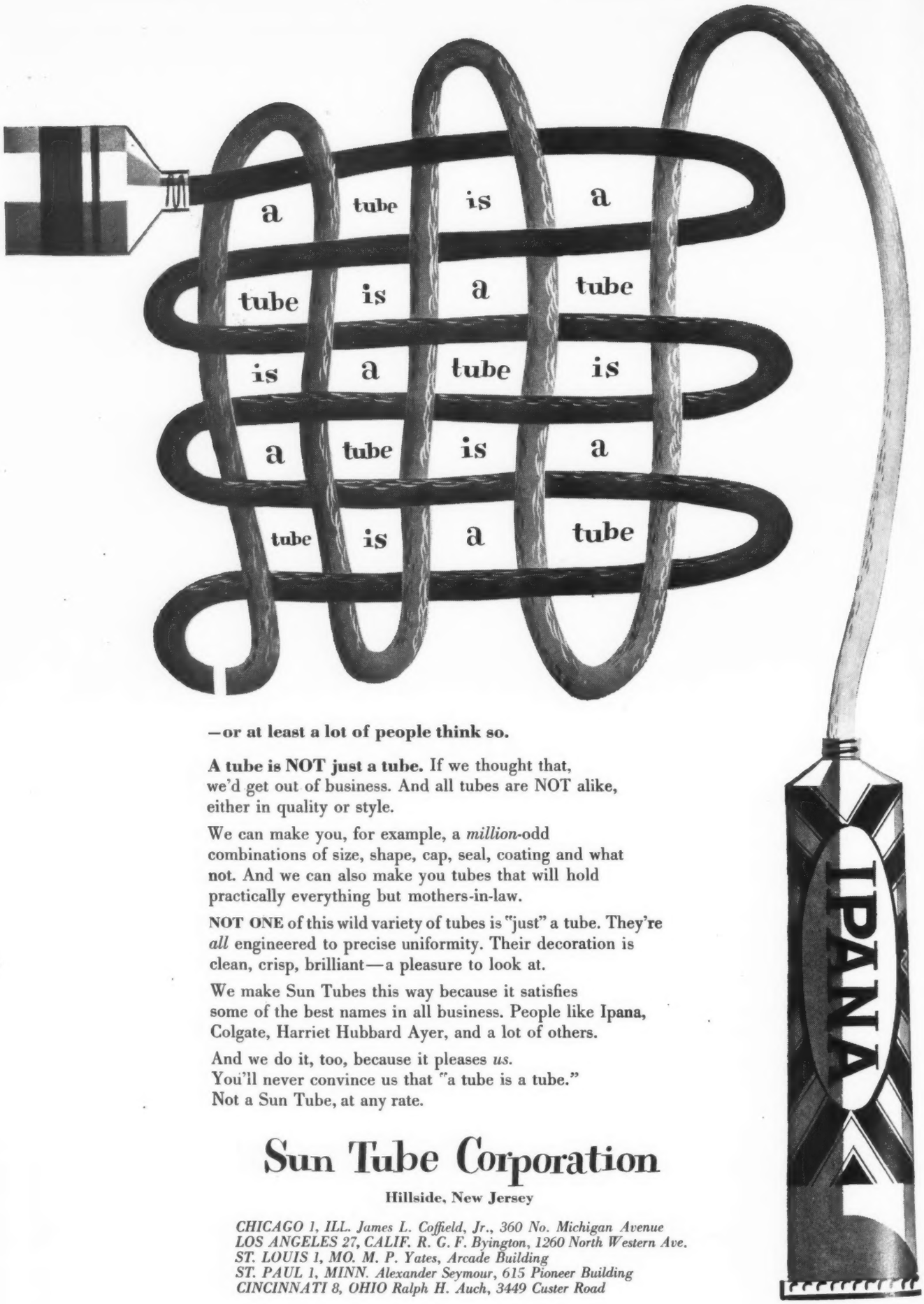
THE OHIO BOXBOARD CO.

RITTMAN, OHIO

Manufacturers of paper board, folding boxes, corrugated and fiber shipping containers, and converted specialties

SALES OFFICES: RITTMAN • AKRON • CLEVELAND • CINCINNATI • PITTSBURGH • NEW YORK • CHICAGO

Capacity 500 tons daily



—or at least a lot of people think so.

A tube is NOT just a tube. If we thought that, we'd get out of business. And all tubes are NOT alike, either in quality or style.

We can make you, for example, a *million*-odd combinations of size, shape, cap, seal, coating and what not. And we can also make you tubes that will hold practically everything but mothers-in-law.

NOT ONE of this wild variety of tubes is "just" a tube. They're *all* engineered to precise uniformity. Their decoration is clean, crisp, brilliant—a pleasure to look at.

We make Sun Tubes this way because it satisfies some of the best names in all business. People like Ipana, Colgate, Harriet Hubbard Ayer, and a lot of others.

And we do it, too, because it pleases *us.* You'll never convince us that "a tube is a tube." Not a Sun Tube, at any rate.

Sun Tube Corporation

Hillside, New Jersey

CHICAGO 1, ILL. James L. Coffield, Jr., 360 No. Michigan Avenue
LOS ANGELES 27, CALIF. R. C. F. Byington, 1260 North Western Ave.
ST. LOUIS 1, MO. M. P. Yates, Arcade Building
ST. PAUL 1, MINN. Alexander Seymour, 615 Pioneer Building
CINCINNATI 8, OHIO Ralph H. Auch, 3449 Custer Road

It's No Secret...

We're Announcing

The New 1948 Modern Packaging Encyclopedia

This year there are no restrictions on the amount of space which can be bought in the 1948 Modern Packaging Encyclopedia.

As usual, position will be allocated in the order in which orders are received. That's why we advise

IMMEDIATE SPACE RESERVATION NOW

In case you didn't know, the '48 edition will accept space for the first time in ¼ and ½ page units.

SPACE RATES AND CIRCULATION DATA ON REQUEST

Write, wire or phone.

PACKAGING CATALOG CORPORATION

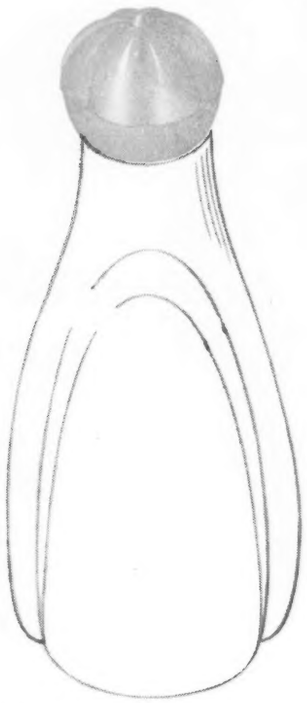
122 EAST 42nd STREET • NEW YORK 17, N. Y.

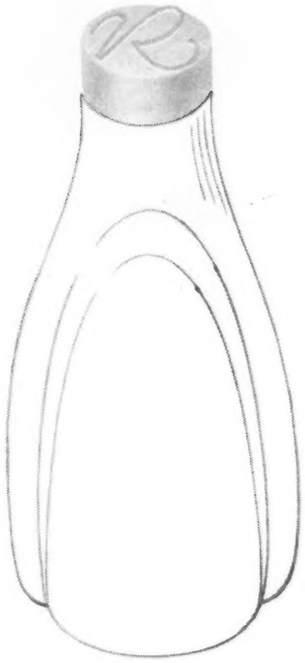
AShland 4-0655

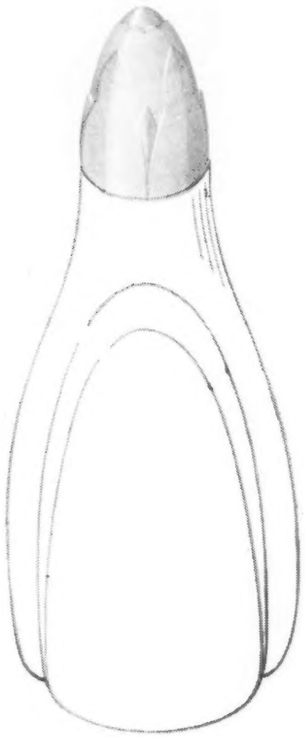
Make a stronger bid for Sales with a Private Design Cap

Here are three Armstrong's Artmold Cap designs that may suggest ideas as to how you can give your package an air of distinction and quality.

Custom designed to emphasize the character of your product and package, an Artmold cap will give it a sales-building individuality that can be achieved in no other way.







Once selected, your Artmold cap design is yours exclusively and can be made in a color of your own choice. For design suggestions and cost estimates, including mold costs, send a sample or drawing of your package to Armstrong Cork Company, Glass and Closure Division, 5902 Prince Street, Lancaster, Pennsylvania.

ARMSTRONG'S *Artmold* CAPS
PLASTIC

Here is MEZZOTINT...

Back again!

to give sparkling eye appeal to–

BOX WRAPS

DISPLAYS

GREETING CARDS

GIFT WRAPPINGS...

and a variety of other decorative purposes

IN 6 COLORS AND 4 EMBOSSING PATTERNS

Uniform color tone

Attractive embossing designs

Colors to match every need

Basic paper strength

...and Keller-Dorian Quality Throughout!

PROTECTION

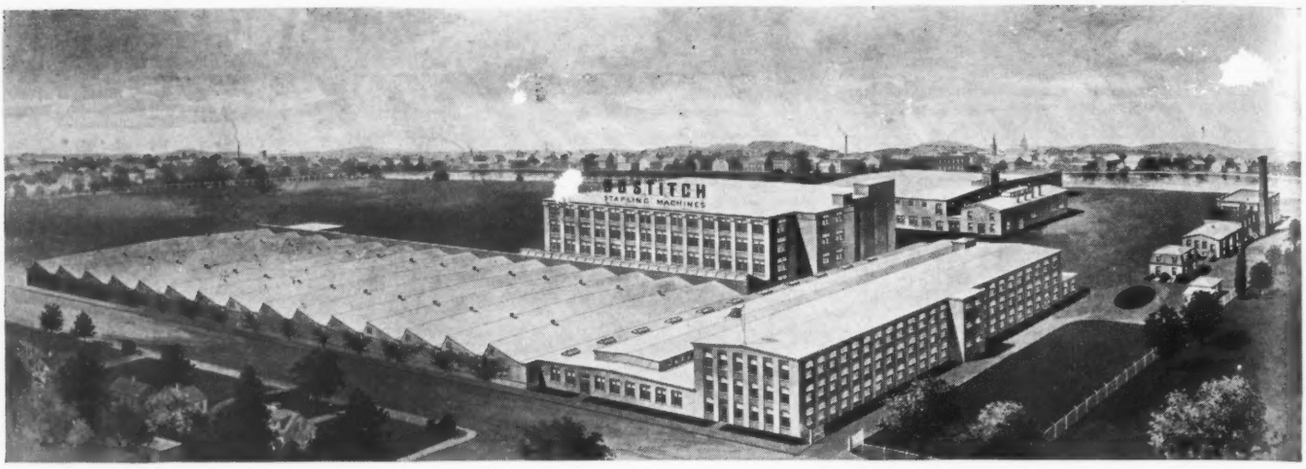
KELLER-DORIAN

KELLER-DORIAN

CORPORATION

Empire State Building, New York 1, N. Y.

DISTINCTIVE DESIGNS IN STAINLESS METAL FOILS



Here's NEWS in the Field of Stitching

Double-Barreled Announcement by Bostitch

1. **The Stitcher Department of Dexter Folder Company has been taken over by Bostitch.**

2. **Bostitch has more than doubled its capacity by moving into a new plant at Westerly, Rhode Island.**

The Sales and Service men of the Dexter Stitcher Department, combined with our own force, both specializing exclusively in fastening problems, strengthens our ability to give broader, better service.

For years, the stitchers sold by Dexter Folder Company have been manufactured by Bostitch. The new arrangement gives us more direct contact with our users and provides them, in turn, with more personal contact with our organization.

We have been moving for several months, in order not to disrupt production, and are now located in our new plant at Westerly, R. I. This has more than doubled our capacity and we are taking care of orders as fast as sufficient materials become available.

No matter what materials you fasten:—plastics, cloth, wood, paper, leather, or even metal . . . one of the 800 Bostitch machines may do it better and faster with wire. Skilled research engineers and 250 field men in 91 key cities offer you the benefits of 50 years' stitching and stapling experience.

Why not take advantage of this? Send description of your fastening problem or ask for folder applying to your industry.

BOSTITCH

fastens it better, AND FASTER with wire

ALL TYPES OF MACHINES FOR APPLYING STAPLES
ALL TYPES OF STAPLES APPLIED BY MACHINE

BOSTITCH 506 MECHANIC ST.
WESTERLY, R. I.

SALES *by the Package!*

MILLIONS OF CONSUMER-PRODUCT SALES are made daily in which *the influence of an attractive package* is a deciding factor.

The volume of these "*sales by the package*" is indicated by the results of national surveys* which show that 62% to 75% of the 65 million adult women—who buy ¾ of all goods sold at retail—make up to 53.8% of their buying decisions at the point-of-sale—selecting items and brands they had *not* planned to buy when they entered the store.

Thus—packages that attract, and make a better impression of quality within, win sales! Ritchie produces millions of such sales-making packages for America's leading merchandisers.

NEVER UNDERESTIMATE THE POWER OF THE PACKAGE!

W. C. Ritchie and COMPANY
8841 Baltimore Avenue, Chicago 17
★ SET-UP PAPER BOXES
★ FIBRE CANS
★ TRANSPARENT PACKAGES
COPYRIGHT W. C. RITCHIE & CO.

WAY TO INCREASED SALES. Let Ritchie help you develop a package that meets the increasing challenge of self-service retailing. A practical, production-planned package that instantly identifies, fully protects and conveniently dispenses your product. Easy to fill or pack—to handle and display—but above all an attractive *SELLING* package.

**Consumer surveys conducted for E. I. du Pont de Nemours & Company, Incorporated*

NEW YORK • DETROIT • LOS ANGELES • ST LOUIS • MINNEAPOLIS • MILWAUKEE • PITTSBURGH • PORTLAND • SEATTLE • MIAMI

THE KEY TO ACCURATE REGISTER IN CONTINUOUS AND ALL-OVER DESIGN PRINTING

MOSSTYPE* DESIGN ROLLERS

Flawless register and uniformity of impression need not be a problem in all-over printing of decorative papers ... box coverings ... labels ... gift wraps ... papetries ... food wrappers ... corrugated boxes ... forms ... security tints ... and all other paper specialties. These required qualities are achieved without costly plate-mounting, make-ready and proving operations in your shop when you use MOSSTYPE Design Rollers.

MOSSTYPE takes your original design or rough sketch—delivers printing design rollers whose rubber plates are permanently bonded in accurate register to steel cylinders or cores ... ready to install on your press.

Write for full details and set of MOSSTYPE dimension forms ... or send design sample and cylinder specifications for quotation on ready-to-run MOSSTYPE Design Rollers.

* Reg. U. S. Pat. Off.

MOSSTYPE CORPORATION

33 FLATBUSH AVE.

BROOKLYN 17, N. Y.

With Patapar you get PROTECTION...

Patapar* Vegetable Parchment has what it takes to really protect foods.

It has high wet-strength. You can soak Patapar in water—or boil it—and it will remain strong.

It is grease-resisting. When it comes in contact with grease, fats or oils Patapar resists penetration.

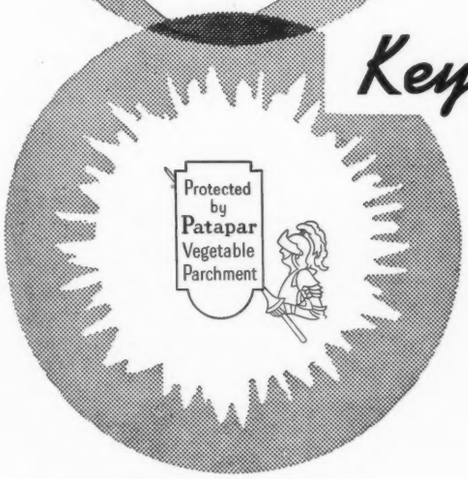
It is odorless, tasteless, pure of texture.

PLUS *these extra services:*

Beautiful color printing

Brilliant effects are obtained by printing Patapar with brand names and colorful designs. We do the printing in our own plants by letterpress or offset lithography. We'll print your wrappers in one color or several colors — using inks that are moisture proof, colorfast, and harmless to taste.

As specialists in printing Patapar we do the work skillfully and economically. Ours is a complete printing service — art work, engravings, typesetting — everything.



Keymark Free

When you order printed Patapar we'll gladly include the Keymark on your wrappers at no extra cost.

The Patapar Keymark is nationally advertised. Women know it as a symbol of protection. And when they see it on your wrappers it reminds them that your product inside is well protected.

* Reg. U.S. Pat. Off.

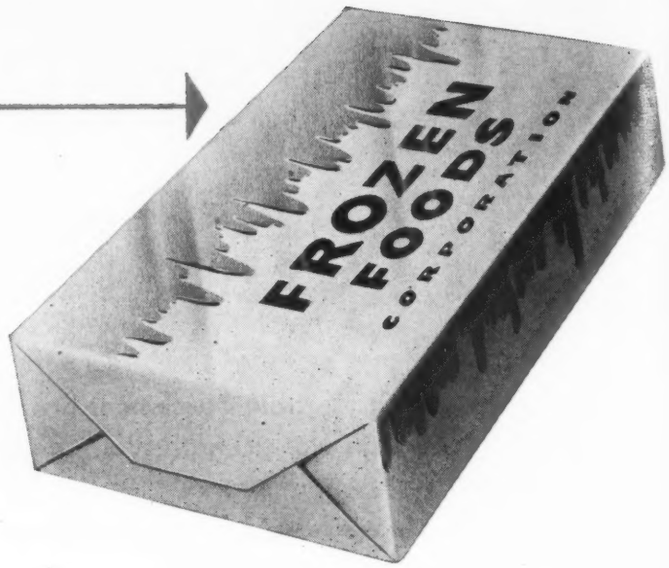
Paterson Parchment Paper Company • Bristol, Pennsylvania

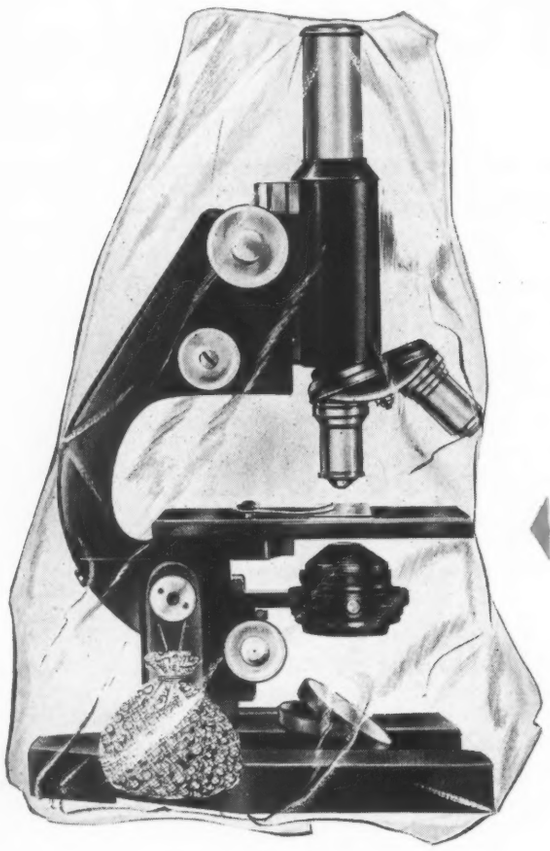
Headquarters for Vegetable Parchment Since 1885

WEST COAST PLANT: 340 BRYANT STREET, SAN FRANCISCO 7, CALIFORNIA

BRANCH OFFICES: 120 BROADWAY, NEW YORK 5, N. Y. • 111 WEST WASHINGTON ST., CHICAGO 2, ILL.

how to keep moisture in





or dry it out!

S/V MICROCRYSTALLINE waxes guard frozen foods

S/V SOVABEADS protect precision parts

No MATTER what your packaging problem, it will pay you to investigate Socony-Vacuum Process Products for the answer.

For instance, if it's keeping moisture *in* to protect frozen foods, you'll find exactly what you need in S/V Product 2300 Series Waxes. These microcrystalline waxes, blended with paraffin waxes, meet all the special requirements for coating paper, paperboard and glassine for frozen foods. They stay flexible at low temperatures, won't chip or flake off.

On the other hand, if your problem is to absorb "in-the-package" moisture, you'll want to know all about Socony-Vacuum's new bead-type desiccant—S/V Sovabeads. Hard and durable, these tiny beads are honeycombed with ultra-microscopic pores that take up moisture like thirsty sponges. They're chemically inert, and if properly used, cannot affect packaged goods in any way.

* * *

Call your Socony-Vacuum Representative for full details on these products as they may apply to your particular needs.

SOCONY-VACUUM OIL CO., INC., 26 B'way, New York 4, N. Y., and Affiliates: Magnolia Petroleum Co., General Petroleum Corp.

What's New in Petroleum for Packaging

Container Linings . . . S/V microcrystalline waxes protect interiors of barrels, drums, tank cars.

Heat Sealing . . . Special waxes produce tough, tenacious seals on paper.

Frozen Foods . . . S/V microcrystalline waxes give flexible moisture-vapor proof coatings.

Dehydrated Foods . . . S/V microcrystalline waxes keep contents dry, when used as coatings.

Beer Cans . . . S/V Petrolatums give flexible inert linings.

Rust Preventives . . . S/V Sova-Kotes keep metal from rusting in storage and shipment.

Process Products
SOCONY VACUUM

Socony-Vacuum Process Products

TUNE IN THE MOBILGAS PROGRAM — MONDAY EVENINGS, 9:30 E.S.T. — NBC

Present your Products in...

TRANSPARENT *Plastic* BOXES • CANS • DISPLAYS

Hundreds of items... Confections... Cosmetics... Toys... Jewelry... Bakery Products... Novelties, etc.... are "half sold" when they are well displayed in Weinman Transparent Packages. Appeal to the "Impulse" buyer as well as the "Shopper". Your product will get the decision twice as often. Many stock size containers to choose from.

INTRODUCING...

"Plasti-Form" moulded containers and displays. Odd-shaped plastic packages made by a patented process without mold charges. Has endless posibilities for distinctive packages in many fields.

Plasti-Form PROCESS PATENTED

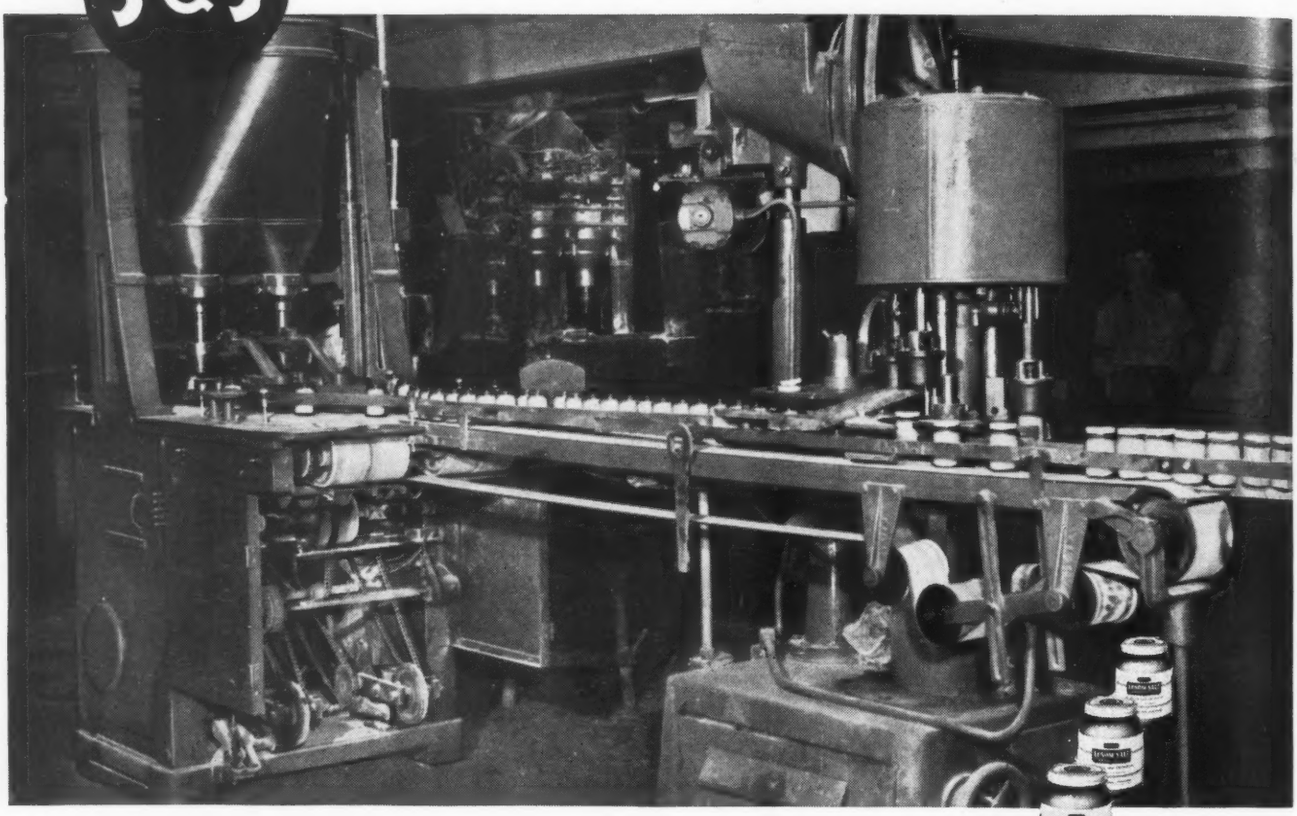
Send for samples, prices and packaging suggestions.

WEINMAN BROTHERS, INC.

Manufacturers since 1919

325 NORTH WELLS STREET • CHICAGO 10, ILLINOIS

S&S at McKESSON & ROBBINS



The S & S HG-84 Duplex Heavy Duty Filling Machine answers their problems. Three sizes of jars are filled on one machine and fed into the automatic capping unit at the rate of about 60–72 per minute. While filling with speed and accuracy the HG-84 vibrates to insure complete fill.

The HG-84 can also be supplied with "Auger-Vac"—the auger-vacuum system for dustless fill and tight pack—is available in various types. It fills not only jars, but cans or other air-tight containers with pulverized coffee, powdered milk, ice cream mix, malted milk, cocoa or numerous similar products, in the amounts desired. Full particulars on request.

STOKES & SMITH Co

FRANKFORD, PHILADELPHIA 24, U.S.A.

FILLING • PACKAGING • WRAPPING MACHINES

SPEEDS TO SUIT YOUR NEEDS 15—30—60—120 PER MINUTE

"Better machines for better packages"

Artist – Fred Kabotie, native of Arizona

ARIZONA—*annual purchases: $300 million—mostly packaged.*

CONTAINER CORPORATION OF AMERICA

SAVE WASTE PAPER

Modern PACKAGING
VOLUME 20
NUMBER 6
FEBRUARY 1947

Spic and span uniformed deliverymen handle paper containers of certified rehydrated milk for Lecheria Nacional in Mexico. Dried milk is shipped from United States by Kraft Foods Co., rehyrated and packaged in consumer cartons at modern plant in Mexico City.

FOREIGN MARKETS

A golden opportunity to sell more packaged goods,

but act fast, and watch the packaging P's and Q's

This is a time of changing markets—and, for United States manufacturers, a good time to consider seriously the possibilities of new foreign markets as well as their domestic ones.

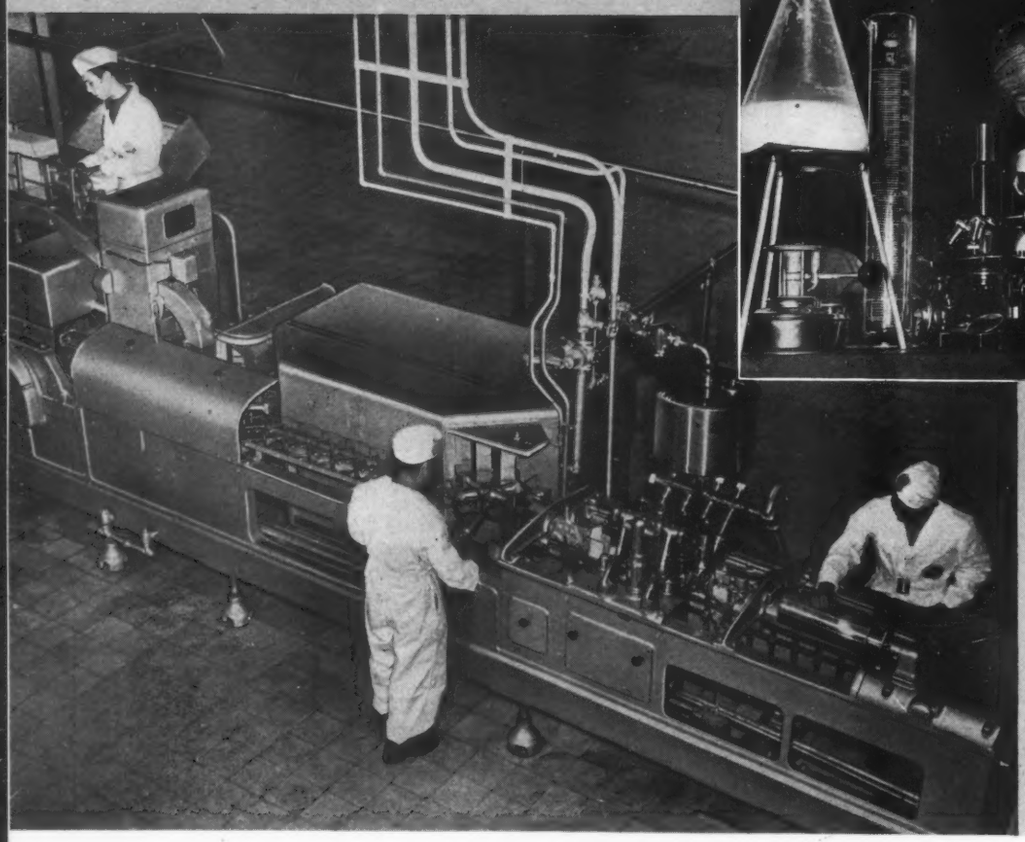
Never have American packaged goods been held in higher favor all over the world by people who have seen them in the hands of American armed forces or received them through UNRRA and other relief and lend-lease agencies.

Already there is competition in the foreign field. The British—past masters in foreign trade—are doing without at home to build up export business. All over the world British crates and boxes are swinging out of British ships bearing the slogan "Britain Delivers the Goods." Sweden and Switzerland are also active in building up export markets for packaged goods.

The American manufacturer should not overlook the many opportunities to exchange profitably American production and packaging know-how in foreign fields.

A new operation in Mexico is a good example and shows how a new market, involving an unusual packaging operation, has been opened up for a large United States dairy firm.

Mexico needs milk. For years the Kraft Foods Co.



Chemist at Mexico's Lecheria Nacional examines samples of rehydrated milk every four minutes before packaging to assure purity of product.

Milk is untouched by human hands. Packaging is done on completely automatic production line, where cartons are shaped, sterilized, filled, sealed.

has been shipping dehydrated milk to Mexico in consumer packages and will continue to do so. But to help the Mexican government solve the distressing problem of milk shortage by providing milk in liquid form and door-to-door delivery, Kraft is now supplying dehydrated milk to Lecheria Nacional, established last November in Mexico City. The dried milk goes from the States in wooden barrels lined with several layers of corrugated carton protectors containing 200 lbs. net each. The milk is rehydrated at Lecheria Nacional, said to be the largest plant of its kind in the world, with a fully modern automatic production line comprised of American machinery.

The dried milk is rehydrated with water which goes through six purification processes. The reconstituted milk is poured from the rehydrating machine directly into the sterilized, paraffined one-liter (a little more than a quart) square cartons and sealed. It is then loaded onto refrigerated trucks by an automatic conveyor and delivered from house to house by uniformed deliverymen, never touched by human hands. Such sanitary handling and scrupulous cleanliness are new to the milk business in Mexico.

The rehydration plant has a laboratory for experimental purposes and a laboratory where the milk is tested every four minutes before it goes into the filling machines. The plant is steam-cleaned every four hours. Laborers undergo daily medical examinations, take showers and change into white uniforms every morning before beginning work. A physical check-up of each worker is effected every two weeks.

The whole-hearted acceptance of this new product by Mexican consumers is indicated by the fact that on the first day orders were taken for delivery, three telephone lines were so jammed that another line had to be added. Since Mexico City alone has had a shortage of 150,000 liters of milk daily, it is not mere optimism to suppose that the people of Mexico will welcome Leche Sello Azul widely.

Legal considerations

Nothing is more important in winning acceptance in the foreign field than a good package. The hazards of trans-ocean shipment were discovered early in the war when many of the first military shipments arrived in poor condition. But in the field of civilian shipments the packaging problem is a lot more than protection. Products must meet all of the legal requirements, which are different for almost every country. Sometimes they mean certain ways of labeling contents; sometimes they specify certain weights. Some demand a registration number, or even specific regulations for the size of printing that may be used. These regulations are stringent and the American exporter must study them intensively before preparing his export packages.

For example, South African regulations now permit cereal products to be packed in 1 oz., 2 oz., 4 oz., 8 oz. or 1 lb. units (or integral pound units) only. The net weight must be printed in type one half the size of the largest type face on the package.

One company reports a recent sad experience. A

shipment of its product, valued at about $200,000, was refused entry to a Latin American country because it was NOT underweight, but overweight. This meant that port authorities held it up for increased import duties which in that country are imposed by weight. The whole trouble stemmed from the package. Contents which were the right weight when they left the States had absorbed moisture, which naturally increased weight over the specified amount.

There are a number of sources where the United States exporter may obtain information to avoid legal pitfalls, such as the United States Bureau of Foreign and Domestic Commerce, the Export Encyclopedia and various shipping manuals.

Most manufacturers try to make their packages for export as flexible as possible so that they will meet the requirements of several countries at once. General Foods, for example, has adopted a 4- and 8-oz. package of Instant Postum which can be used in many countries. For South Africa, where the net weight must be printed in type of a certain size, the panel is relettered.

Consumer factors

In addition to protective and legal requirements, the packages must also be adapted to suit the habits and customs of the foreign consumers. Careful directions for use and preparation must be given in the language of the country where the product is to be sold. Most companies prefer to maintain the same package identity for their foreign packages as for their domestic ones. These trademarked designs become familiar around the world. They are recognizable even in areas where the percentage of illiteracy is high and shoppers—usually servants—can recognize them by color, placement of lettering and pictures even if they cannot read. However, it has been found that informative copy must, in many cases, do an educational and promotional job. A certain baby food has won considerable acceptance in Cuba since the uses for the strained baby foods were printed on the package in Spanish. There was little market for this product in Cuba before that.

Trade names are not always translatable, but sometimes it is advisable to change them if they are too difficult to pronounce in a foreign tongue or are not understandable. Standard Brands, for instance, put out a meatless stock for flavoring soup, bouillon, gravies, etc., sold under the trademark, "Stox." The company discovered that most Latins could not pronounce the word Stox and that it didn't mean anything to them. Recently the name was changed to "Saroma"—a combination of the words "savor" and "aroma"—both Latin derivatives understandable in all Latin American countries as well as among French-, Italian- and English-speaking peoples. The new brand name is easy to pronounce. The labels were completely redesigned.*

Direct copy translations for directions and informative material also are not always feasible. Many languages are much longer than English and it takes more space to say the same thing. Some words directly translated may be offensive in a foreign language. Such a product name as "cold cream," for instance, has no equivalent in Spanish so English is used.

Unit sizes of consumer packages are also an important consideration in planning for foreign markets, not only to conserve bulk and weight in shipment but because of the buying habits of the consumer. In no other country is purchasing power as high as it is in the United States and packages containing a quantity which would be a popular sales unit in the United States may be way out of line in other markets. Tablets such as aspirin in many foreign countries are purchased in one-

* Labels, Bon-Ton Press, New York.

An American brand name may be difficult to pronounce or understand in a foreign tongue. Standard Brands discovered that their name for a seasoning, "Stox," (left) didn't mean anything to Latin Americans. The name was changed to "Saroma," a combination of "savor" and "aroma," both Latin derivatives, understandable in several languages. Photo shows adaptation of rose and green Saroma label to family group.

Identity of Instant Postum can is maintained all over the world. Label copy is printed in various languages, planned to meet legal requirements of 80 countries. Aluminum inner seal gives added moisture protection. Royal Gelatin Dessert is back for export in carton with duplex waxed glassine liner. Popular sales unit for Tender Leaf Tea in Colombia is tiny carton holding 7 grams. Swans Down package for Latin America carries recipes in Spanish. Horizontal treatment of design is used for export Jell-O packages. Note large type for contents on South African Jell-O. Legal requirements demand weight printed in type half as large as largest type on carton face.

or two-tablet packets. Other over-the-counter drugs are sold in small packets of three or four tablets. If you are packaging a product of this type it is well to find out the quantity that is usually purchased. Even ethical drugs are shipped in much smaller quantities to many countries where sales units are smaller and turnover slower.

Many exporters are beginning to make their own consumer studies of foreign markets where they sell. This is difficult because such studies are costly and also because people in many other countries are not yet educated to accept the fact-finding method of door-to-door interviewers. They are suspicious of a stranger who approaches them to ask questions. This latter problem was solved by one organization for radio listeners recently through the use of a recording device. The

Above, the new Post cereal package adapted for Post's corn toasties in Sweden, thus establishing new design identity in a foreign market. Grape-Nuts are packaged for India and Panama Canal Zone in laminated fibre can with metal ends and friction top to prevent insect infestation and to keep out moisture. Maxwell House Coffee is being packed in these ½-lb. cans in England, a popular quantity for the English market. Royal Baking Powder labels are printed in many languages including Chinese. Royal Baking Powder label covering only a portion of can shows one solution to paper shortage in South Africa.

interviewer merely walked past the houses where radios were tuned in and made a recording of what was being listened to. Since this was done in warm weather when windows were open, there was no need to disturb the residents. A new research organization, called Inter-American Research Service, New York City, is now equipped to handle market research projects for American manufacturers in Latin American countries, using methods similar to those of commercial research organizations in this country.

In countries where there is a high percentage of illiteracy, the problem of building a market by advertising is difficult because there are no publications with sufficient circulation. The *Readers' Digest* Spanish edition, which carries advertising (approximately 1,000,000 circulation in Latin American countries—214,000 in Mexico alone) is building up a useful advertising medium.

Current criticism

During the past year there have been some loud criticisms of export packaging of American goods. A Capetown newspaper which compared British and United States packing said:

"For every 20 claims on insurance for damage to goods from the U.S.A., South African importers have to make only one for damage to goods from Britain. American packing today is simply disgraceful; apparently no difference is made in packing for the domestic and export markets."

This criticism appears to be entirely too severe, according to the *Export Trade and Shipper*, a weekly magazine for export executives. "We do not believe," says this publication editorially, "that it applies to the shipments of the great majority of experienced American exporters, but we feel that it cannot be dismissed as an idle report. Similar statements, although not nearly as vehement as this one, are being voiced from many other countries throughout the world. They cannot be ignored."

The editorial points out that there are many newcomers to the export field who do not understand good packaging or don't care. Or they are unaware of the conditions which merchandise will be up against when it goes overseas—open storage exposed to the elements where there are no warehouse facilities—pilferage on piers and in ships—flimsy materials that do not offer sufficient protection from rough handling.

S. S. Glaxon, vice president of Seaboard Fruit Co., blames the trouble on what he terms "general exporters" and there are hundreds of them listed in classified telephone books who ship anything and everything—novelties, wearing apparel, prepared foods—usually odd lots or surplus definitely not packed for export. Such shipments are having a very bad effect on international trade relations. He mentioned a quantity of breakfast foods, manufactured by a well-known firm, which found its way to a tropical country through one of these inexperienced export channels. When the product got into the hands of the foreign consumer it was not fit to eat. It had not been packed for export in the first place and the company that manufactured it had nothing to do with its sale outside the country. Most well-known manufacturers of breakfast foods package differently for export than for domestic distribution, usually with a moistureproof overwrap or extra inner liner.

The customer, of course, can collect insurance for damaged goods, but too many claims mean increased insurance rates. But even that is not the most important factor. The real worry is the loss of prestige to American goods. To old-time exporters who pack their goods carefully, this is of serious concern. The foreign customer who is dissatisfied with the condition of the goods arriving from an American manufacturer is likely to blame United States industry and to seek similar goods from other sources.

Some of the trouble may be due to shortages of supplies and also to some old timers who may still ship to foreign customers in domestic containers. Whatever the causes, many current practices resulting in losses can be improved with proper attention.

Adequate protection

Attention should be given first to careful marking. Entire shipments are often lost because the identity is lost from the package. The shipping case should be kept clear of all markings except those which will aid in getting the shipment to the customer. Too much advertising display and identification encourages pilferage. Items such as portable radios, for instance, labeled with the name of the manufacturer and a big display sticker saying "radio" are tempting invitations to theft.

Corrugated and solid fibre containers are used successfully for shipping many items, but they must be engineered with interior packing to prevent failure when they are dropped or stacked. Wooden crates and cases are recommended for heavier merchandise. Metal straps on cases discourage tampering because when broken they call attention to the tampering. Some shippers sew burlap around fibre and corrugated cartons and seal the seams with wax for the same purpose of discouraging pilferage.

A new lightweight steel case now being offered for use of shippers by the New York and Porto Rico Steamship Co. has been used for nearly a year with practically no losses reported at all.

The 1,800-lb. containers, built by the Leathem D. Smith Shipbuilding Co., Sturgeon Bay, Wisc., are made of welded steel sections forming a case $7\frac{1}{2}$ by $6\frac{1}{2}$ by $6\frac{1}{2}$ ft., with a capacity of 300 cu. ft. and 12,000 lbs. The cases are loaded by the steamship company on a tariff rate prepaid freight charge basis. Assorted shipments may be packed in the same container. Freight charges are assessed on each package at tariff rates by measurement and weight. There are no heavy lift charges.

Next to the hazards of handling in shipment, protection against climatic condi- (*Continued on page 166*)

KODACHROME, JOHN H. HEFFREN

This month's COVER PACKAGE*

THE PROBLEM: A high-quality perfume, named "Celescent," to be packaged in a fine hand-made bottle; the bottle to be contained in a set-up box of special construction, usable for display and as a permanent container for the perfume on the consumer's dressing table. The set-up box can be color-printed, lithographed or otherwise decorated in a distinctive manner which will set this perfume off from its competitors. It is expected that this perfume will be marketed through the higher-class department and specialty stores in their regular toiletry departments; the product, being new, must be enabled to compete with established brands; therefore, good display value and distinctive appearance are essential at any cost, although low cost would be desirable.

THE SOLUTION: To the designer, the name "Celescent" suggested a design treatment in an exotic, celestial mood. For his primary container he chose opal glass in a special mold which would give the effect of Chinese jade. The closure is of the molded plunger type, with applicator, and with an ornament of silver-plated plastic wire formed into a spiral. The eight-pointed star, which is the sole decorative feature of bottle and box, was selected in line with the celestial theme. The silver star and edgings are obtained from the aluminum foil which is used as the cover paper, otherwise printed with a rich, chocolate brown matter ink. This color effect is most unusual. The two halves of the box, hinged by the foil, are each cut from one flat piece of paperboard or veneer-kraft. A die-cut inside platform holds the bottle. The unusual shape of this box provides four different display setups: (1) folded straight back, base against cover, as shown in the picture; (2) box reversed and bottle placed on the platform thus provided on bottom section; (3) the two halves flat on their inside faces with a bottle placed atop each half and (4) a single bottle atop the closed flat box.

THE DESIGNER: Jon Stengren is of Swedish descent and studied art at Cooper Union. He was at first interested in painting but "drifted" (he says) into packaging because he was attracted by the challenge of art in three-dimensional form. He was tutored in package design by Walter Westervelt; much of his current inspiration derives, he admits, from the Chinese. From his own studio in Forest Hills, L. I., have come scores of packages having as their special appeal unusual geometric shapes and constructions. His Cover Package is reminiscent of his many best-sellers that have found their way into MODERN PACKAGING'S pages in recent years, among them the Mary Chess bath preparations (Jan. & June, '46); Matchabelli's Crown Duet perfume (Sept. '46); the McKelvy perfumes (Oct. '46) and Cargo toiletries (Dec. '46). Among his clients are Lucien Lelong, Schiaparelli, Herb Farms, Milk Maid, R. H. Macy, Charles of the Ritz and Lengyel.

JON STENGREN

* Brand and company names used in this hypothetical design are purely fictitious; the design remains the property of the designer who conceived it for this cover illustration.

These are among the 17 products for which Centaur is providing shelf containers in an extensive revision of shipping practices in line with dealers' needs. The Molle carton and the Midol tin are new.

SHELF CONTAINERS

Centaur applies NWDA recommendations to break up larger shipping lots into fractional units for added convenience and economy in distribution

by JOSEPH D. BOHAN*

The importance of packaging in building and holding the good will of *consumers* goes without saying. Importance of the good will which a manufacturer can achieve with the *wholesaler*, who distributes his products, and the *retailer*, who merchandises and sells them to the public, is currently assuming new proportions. Wise indeed is the manufacturer who does not neglect the potentialities in packaging for making friends with and influencing the distributor and ultimate counter salesman of what he has so carefully produced and put into containers.

If so-called "eye appeal" is the *ne plus ultra* of packaging fashions as they concern consumers, "handling appeal" is the objective to be sought in this behind-the-scene channel of distribution.

Many have been aware of this fact and the wholesale druggist more than any other has clamored for definite action on it. Last year the National Wholesale Druggists Assn. became particularly insistent that something be done to improve package handling appeal at the wholesaler and retailer levels.

W. R. James, of Towns & James, Inc., Brooklyn wholesale drug house, and chairman of the NWDA packaging committee, presented the issues clearly to the trade in a report† to the association's annual convention entitled "Packaging and Its Effect on Handling and Selling Costs." Mr. James offered some definite suggestions to manufacturers.

"First," he said "please examine and re-examine your packaging not only from the standpoint of shipping cases but also as to inner cartons. The number of items which the retail drug trade can properly buy and turn over in case lots is a small part of the total number of the items handled in wholesale warehouses.

"With improved handling can come improved selling, so that we wholesalers can assist our manufacturers

* Vice President, Sterling Drug, Inc., and General Manager, Centaur Co. Division.

† See "What Size Shippers?" MODERN PACKAGING, Sept. 1946, p. 93.

and ourselves by making sure that our retail customers have adequate stocks on their shelves and that the merchandise reaches them in good condition and with undiminished eye value."

It so happened that the Centaur Co. Division had already been examining its packaging from the standpoint advocated by the NWDA spokesman.

There are 17 different packages, including all the various sizes, in the Centaur line. Not all of them were involved in this particular "unseen goodwill" re-packaging program.

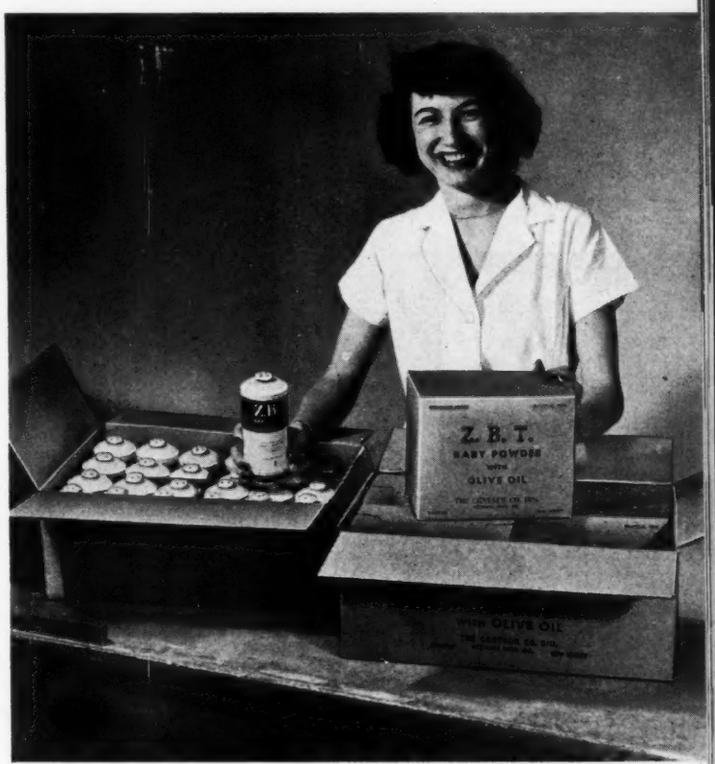
The 10-cent size of Kling, for instance, is bought in large quantities for rapid turnover. Shelf containers, therefore, are unnecessary. Our practice is to nest this size, with three dozens to a shipping case.

We have adopted shelf containers, however, for the 35-cent size of Kling. We put a half dozen in each shelf container and put six shelf containers in each shipping case. Exactly this same procedure is followed for the 60-cent size of Kling. Since Kling is packed in tin for consumers, the question of product damage is not involved. The use of the shelf containers does facilitate warehouse handling by wholesalers, offering a good will factor worth consideration.

We have two different sizes of Midol. A five-tablet size is now being marketed in a cellophane package with a cardboard sleeve. We pack 12 of these packages in a shelf container and include 12 shelf containers in each shipping case. Only recently we have returned to prewar tin in the 12-tablet size of Midol. At present we are packing 12 tins in a special counter display dispenser, with 12 dispensers to a shipping case. The cover of the dispenser after removal of a cardboard sleeve lifts up to make an inviting advertising display. Instructions printed on the outer sleeve advise the retailer to place the dispenser near the cash register or on the counter in departments which carry feminine products.

Fletcher's Castoria and Z.B.T. Baby Powder are now in shelf containers. By April of this year similar additional packaging will be instituted for Molle Brushless Shaving Cream and Ironized Yeast.

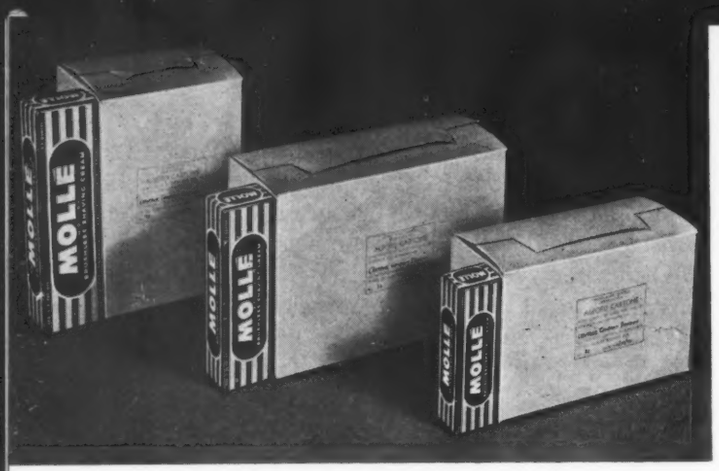
There are two different bottle sizes for Fletcher's Castoria, the regular and the family sizes. Today we are packaging the regular Castoria in units of one dozen each. Each bottle is enclosed in its own carton and



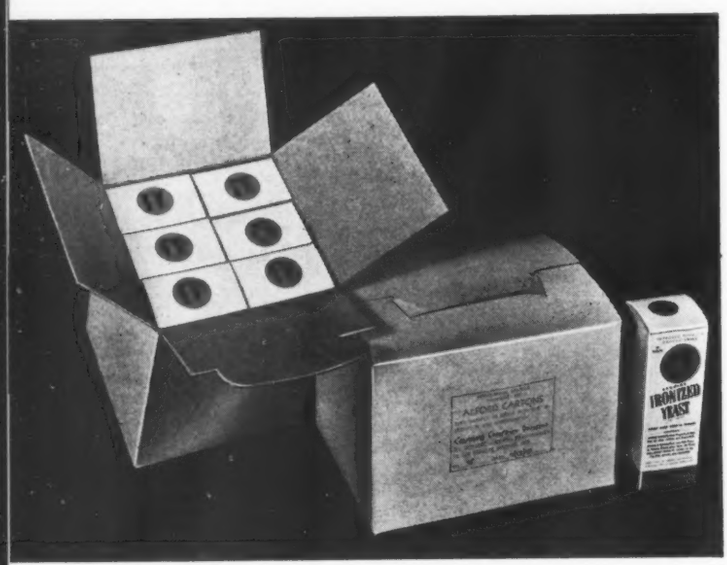
Old (left) and new methods of packing two dozen Z.B.T. powder. Each half-dozen is now in a chipboard carton. This means wholesaler and retailer convenience and added protection for product.

The first product in the Centaur line to discover the advantages of inner packaging was Castoria. This item is now simply bundled in a printed paper wrapper in units of six each.

Showing how six of the colorfully wrapped half-dozen bundles fit in shipping cases. For most of the products the dimensions of the shipping cases have been increased only ¼ in. each way.



Unit cartons and chipboard shelf containers for three sizes of Molle tubes. These are samples showing sizes to be used. Unit carton is now newly redesigned in yellow and brown stripes.



By April Centaur expects to have Ironized Yeast in these chipboard containers—a dozen for the small size and a half-dozen for the large. The containers will carry identifying trademark.

the units of one dozen are further wrapped in kraft paper. Next the six one-dozen units are packed in a corrugated shipping container with partitions between the units. The same procedure is followed for the family size except that the units are of a half-dozen each instead of a dozen.

Our Z.B.T. Baby Powder with olive oil, which comes in nursery and hospital sizes, is packed in cans. We now put a half-dozen each of these different sizes into a chipboard shelf container which carries our brand name and other identifying data.

By now we have had sufficient experience with these two products to realize that attention to handling facility in packaging is definitely appreciated by wholesalers and retailers. In the case of Castoria the shelf-container wrapping eliminates most breakage by stopping any shifting within the shipping containers. The use of shelf containers for Z.B.T. has also eliminated most damage to the product resulting from shipment.

To fill a one-dozen order of an item for a retailer it is often necessary for the wholesaler's packer to handle one dozen individual packages and put them in a carton. That extra step and added cost have been eliminated. The half-dozen or dozen units are easily handled for shipping. Should a shelf container be opened to distribute, say, a quarter-dozen packages, the wholesaler can use either the vacant space or the empty container to trans-ship other loose packages, eliminating extra wrapping. A final consideration is the simplification of inventory taking in wholesale stock rooms.

Concomitant with the handling-appeal inherent in the use of inner shelf containers is the reduction in distribution costs to wholesalers. Every labor-saving step presents a potential cut in distribution expense. In these days this is a consideration of utmost importance.

When we determined to extend this packaging refinement to Molle Brushless Shaving Cream and Ironized Yeast, the question arose: "How many packages should be included in a shelf container?"

It is a custom among wholesalers to arrange their order blanks with a line specifying the minimum quantity on which a discount is allowed. Our final yardstick in determining the number of our products to put into the shelf containers was to make the quantity fit in with this wholesaler's line extension for discount.

Molle Brushless Shaving Cream is packed in three sizes of tubes and two sizes of jars. We have long provided for increased visual salability and physical protection by packaging each tube and jar in an individual carton. We found, however, that these individual cartons had not entirely eliminated the problems of breakage and other damage in shipping.

Under the new plan we are packing a dozen packages of our 10-cent tube in a shelf container with three dozen in each shipping case. We follow the same procedure for the 25-cent tube. The 50-cent tube and the 75-cent jar are packed one-half dozen to the shelf container with three shelf containers in each shipping case. We decided we didn't require shelf containers for the $1.25 sized jar. The small quantity per shipper could not be broken down to any set quantity due to the wide quantity range on retail orders. For needed protection, however, we have added extra lining and nesting.

For the four sizes of shelf containers required for carrying out the Molle program, we have designed chipboard cartons with tongued and slotted top and bottom flaps. Each container is printed with all identifying data.

In the case of Ironized Yeast, which is manufactured in tablet form and packaged in two sizes of bottles, each individually cartoned, we have decided to pack one dozen of the 60-tablet bottles to a shelf container and one-half dozen of the 150-tablet size. Chipboard cartons are used here also.

In all instances but one we have retained our original shapes of shipping cases. The addition of the shelf containers has forced us (*Continued on page 172*)

Transparent acetate boxes give quality appearance to lower-priced cosmetics in stock bottles and jars. ▶

Fabricated acrylic box for gift set makes a re-use container. Perfume box with tray becomes jewel case. ▼

Ohrbach's launches own popular-price brand, showing that packages can be beautiful even on a limited budget

Private line cosmetics

Ohrbach's, a New York store famous for fashions on a budget, now adds its own private brand of cosmetics and toiletries for beauty on a budget.

The new private brand is in line with the store's policy to sell quality merchandise for less and in view of fair trade practices in the sale of cosmetics.

To give the customer the most for her money, cost therefore was of paramount importance in planning of the packaging for the new popular-priced cosmetic line which is called Ohrelle.

Basic stock bottles and jars have been transformed into noteworthy packages with plenty of individuality. The dominant decorative motif is the use of gold. All lettering and trade identification is silk screened in gold on the jars and bottles of the treatment line. The gold idea is further accented by polished brass closures. A contrasting color note is achieved by silk screening a delicate floral design on the bottles in pink and green. Lipstick cases, too, are polished brass, while pancake make-up and mascara containers are pink stock molds —urea and acetate, respectively—stamped with gold.

Each individual item, and there are about 40 in all, is presented in a transparent acetate set-up box. This not only gives each item visibility appeal on the counter, but eliminates the need for a folding carton, the company states. Furthermore, the plastic resists soil.

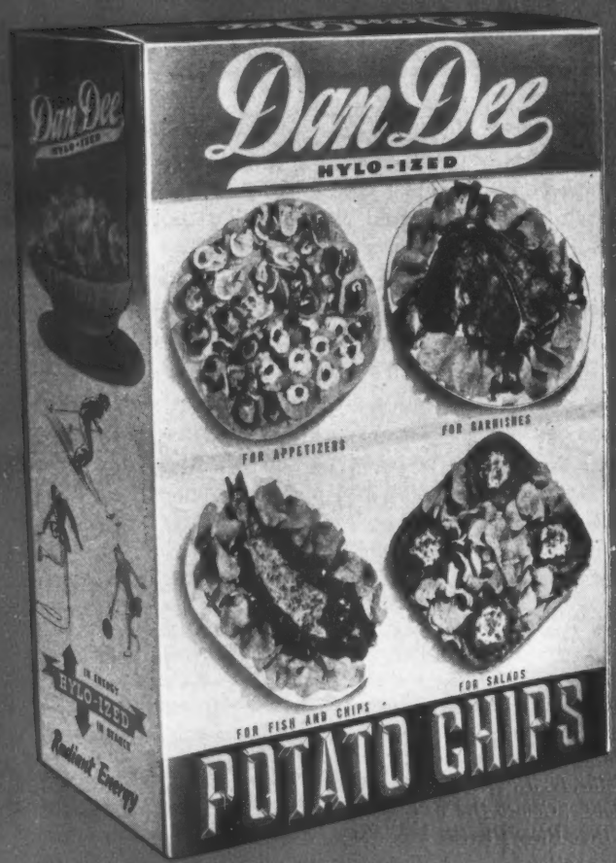
Perfume in the line is called "Gay World," presented in a white satin and gold kid box. The bottle nests in a double-tiered platform of white flocked paper and gold kid. The label, unusually placed vertically on the beveled corner of the bottle, is gold embossed foil.

Among the gift boxes, two are outstanding. One is a fabricated acrylic box which makes a re-use container. The other is a gold brocaded box housing two fragrances of the "Gay World" perfume. It is completely lined with rose velvet and is equipped with a tray that makes it ideal as a jewel box.

CREDITS: *Silk screening on bottles and jars, Creative Printmakers, Inc., New York; closures, Richford Corp., New York; urea containers, Brandwell Co., New York; molded of American Cyanamid Co.'s Beetle material; acetate containers, Brandwell Co., molded of Tennessee Eastman Corp.'s Tenite material and Celanese Plastic Corp.'s Lumarith material; metal lipstick and rouge case, Chase Brass & Copper Co., Inc.; transparent boxes, Everett Transparent Container Corp., New York; perfume bottle, T. C. Wheaton Co., Millville, N. J.; perfume box, Paragon Box Corp., Brooklyn, N. Y.; foil labels, Cameo Die & Label Co., New York; fabricated Lucite box, Blue River Plastics Mfg. Corp., New York.*

LONG-LIVED CHIPS

Dan Dee adopts a big Kodachromed carton for potato chips and converts a machine to apply a protective Pliofilm overwrap



The distribution of potato chips is usually confined to a relatively small area and is ordinarily characterized by short shelf life and quick turnover. But the Dan Dee Pretzel & Potato Chip Co., Cleveland, found their business expanding so rapidly and their territorial demand extending so widely that they had to provide for a longer shelf life. They turned to the package as a means of accomplishing that objective.

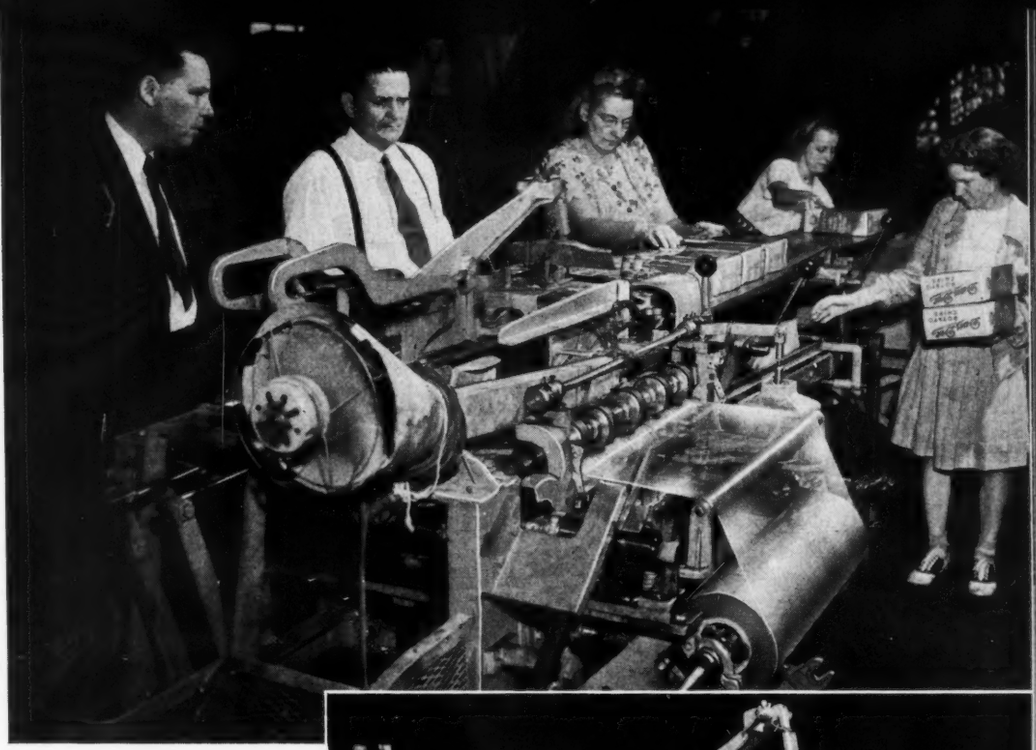
Traditionally, potato chips are distributed either from bulk containers in which the supply is daily replenished or in waxed or glassine paper bags containing a few ounces. In the one case, the Dan Dee people concluded, the modern sanitary principle was violated; in the other case the unit of sale was usually smaller than either producer or consumer desired. Besides, neither of these methods prevented breakage of the chips.

Experimentation and testing of various packaging materials and forms of packages, conducted for more than a year, convinced them that the most satisfactory solution was provided by a carton with an inner bag of waxed glassine and an overwrap of rubber hydrochloride film (Pliofilm)—the carton to prevent breakage of the chips and the overwrap and inner bag for retention of a low moisture content. Fortunately, with the end of the war the film has become more available and the new package is now a reality on the market.

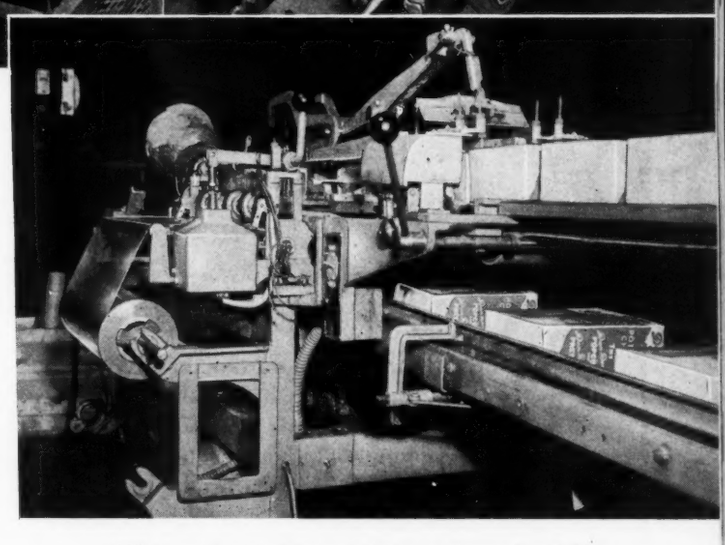
A pound of potato chips bulks large. A carton to hold that quantity is $12\frac{1}{2}$ in. high, $8\frac{1}{2}$ in. wide and $4\frac{1}{2}$ in. deep—a total surface of more than 570 sq. in. or the equivalent of about eight pages of space in a standard 7 in. by 10 in. magazine. That area presented an advertising opportunity too alluring for the merchandising-minded Dan Dee organization to overlook.

They put the challenge before one of their carton suppliers, who took full advantage of the opportunity, utilizing kodachrome shots in a manner new to the potato chip field. The front panel presents an actual full-color photograph of a home scene where potato

Potato chips in party size are suggested by the full-color Kodachrome reproduction on the front panel of this giant carton. Side and back panels effectively suggest uses and benefits. Waxed glassine liner and clear Pliofilm overwrap assure moisture protection. PHOTO, MILPRINT, INC.



Hayssen machine, redesigned by Goodyear and Hayssen engineers, wraps and heat-seals cartons in Pliofilm (fed from roll at right) at speeds of from 30 to 40 per minute.



Filled cartons enter machine on lower level (moving away from camera) and return on upper level, fully wrapped and ready for shipping cases.

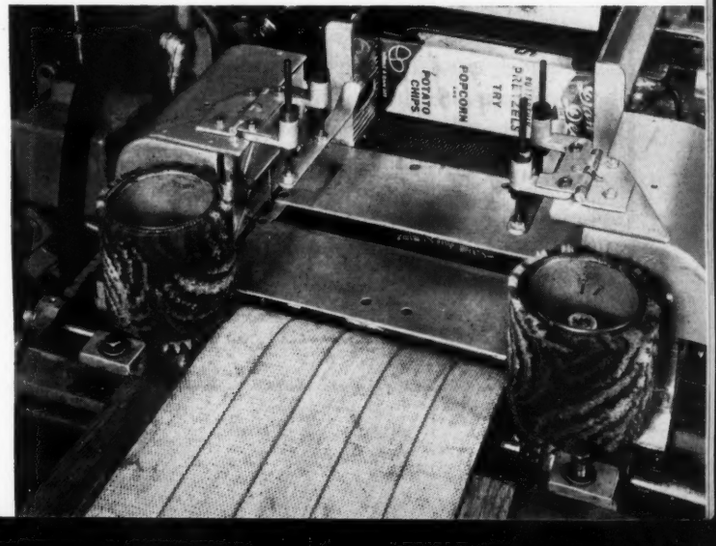
chips play an important role in entertainment.

On the back panel are four direct color shots illustrating suggested uses for appetizers, garnishes, with fish or in salads. One of the side panels illustrates summer sports, the other winter activities. The end panels are used for product and brand name identity. Few dealers would neglect the front or back panels for display purposes, but even if one did, the side and end panels would do a merchandising job, anyway.

Standard operations in the Dan Dee plant are perfectly adequate for filling and closing inner bag and carton, but the outer wrapping with rubber hydrochloride film called for considerable modification of their equipment. As yet, stock models of standard wrapping machines have not been developed that will handle this type of film on a package of this size at mass production speeds. Accordingly, the machine maker and the producer of the film cooperated in the necessary engineering work. The film is a monolithic sheet which upon the application of heat softens and becomes tacky through and through. Therefore, it generally cannot be used in the standard packaging machines designed for cellophane, waxed paper, etc., because these machines are usually equipped with stationary hot plates over which the material slides. The temperature and the friction of these hot plates cause the rubber hydrochloride film to wrinkle and draw and make the material difficult to handle at high rates of speed.

To make a proper seal this film requires a much closer control than is needed for coated cellophane and other heat-sealing materials. The exact conditions for making a weld involve a number of factors. One of these is the time of dwell, which is generally fixed and controlled by the speed of the machine. Other factors are the pressure, the number of plies which the heat must penetrate and the gauge and type of film. The average temperature required is 210 deg. to 215 deg. F., although

Close-up of carton between two oscillating plates which heat-seal two ends. Bar, operating through slot in unheated bottom plate in foreground, seals film on back of carton. Passing between rotary brushes which firm end seals, wrapped carton is discharged on conveyor belt in foreground.



it may vary, depending on the other conditions.

In converting the standard machine to handle rubber hydrochloride film, the stationary hot plates were removed and two side heater plates mounted on duplex oscillating arms to give a parallel motion were added. The bottom hot plate was removed and replaced with a plain unheated plate. Through a slot in this plate, a sealing bar operated from a bell crank was used to form the bottom seam while the package was stationary in the heat-sealing area. Side heaters and bottom heater bar alike were connected by means of a rod to a bell crank on the rear of the machine. This bell crank with its roller is operated from a new cam mounted on the main shaft of the machine and this cam moves the bottom and side sealing plates into the proper position, holding them there while the package is positioned.

As the roller moves off the "dwell" of the cam, a spring presses the side sealer plates and the lower sealer bar into the position for forming the weld. These parts remain in position until the next package is ready to be pushed into place. The heaters used are the same as on standard models of the machine and a standard Hart Thermoswitch controls the temperature of all three heating elements, but a hand rheostat of about 50 ohms resistance has been added to adjust the ratio of heat. By this means it is possible to "balance out" the circuit so that the temperature of the side heater plates is sufficient to penetrate the numerous folds of film which unavoidably occur on the top and bottom panels of the package, yet not high enough to cause the film to stick to the sealer.

The manufacturer of this machine, as well as the manufacturer of the film, foresee an attractive future for automatic machinery to handle this type of package. The film itself has demonstrated its moistureproof characteristics and some forms of it have selective gas permeability.

A number of machine makers are now working on the engineering problems of converting their standard models to handle this wrap at speeds that will make it commercially feasible though they are reluctant to hazard a guess as to possible delivery dates.

CREDITS: *Pliofilm, The Goodyear Tire & Rubber Co., Akron, Ohio. Carton, Milprint, Inc., Milwaukee, Wisc. Wrapping Machine, Hayssen Mfg. Co., Sheboygan, Wisc.*

PLIOFILM OVERWRAPPER FOR MEDICINE CARTON

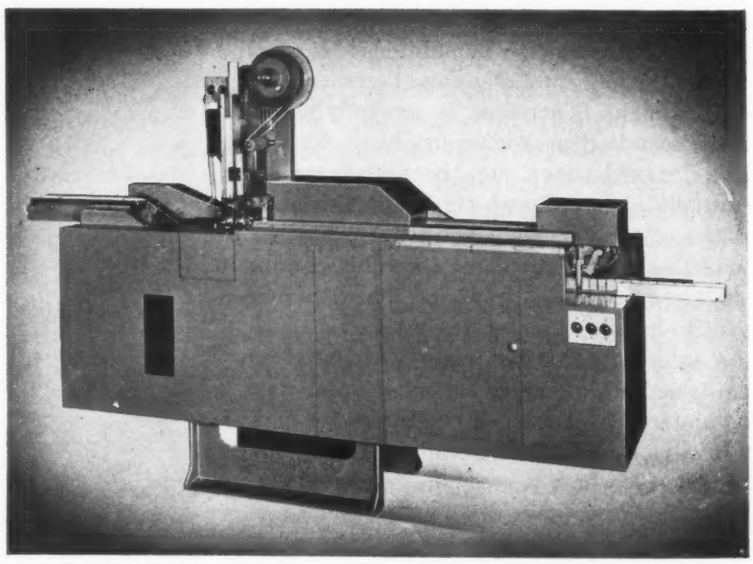
Where a product has need for the water-vapor protection which a Pliofilm overwrap will provide, means of handling the rubber hydrochloride film on mechanical equipment will be found. A case in point is that of "Black-Draught," a powdered vegetable laxative manufactured by the Chattanooga Medicine Co., a product which may deteriorate in contact with moisture.

Cartons of Black-Draught are now being overwrapped and heat-sealed in Pliofilm at the rate of 95 a minute on a conventional cellophane-wrapping machine. The machine manufacturer worked out a rotary type of heat-sealer with a knurled sealing surface, which, according to the Chattanooga company, does the job.

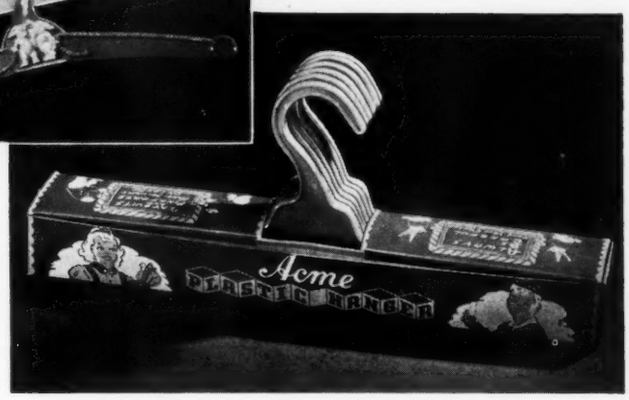
The special machine was installed in the Chattanooga plant early in 1942 but had operated on Pliofilm only a short time when the film became unavailable. Chattanooga engineers then converted the machine back to cellophane and used 450 MST for the following five war years. It was not until recently, when Pliofilm again became available, that the machine was reconverted to use Pliofilm once more. It is now in regular use.

CREDIT: *Machine by F. B. Redington Co., Chicago.*

Machine with rotary heat-sealers can handle cellophane or Pliofilm.



◀ **Adoption of set-up box for packaging baby hangers creates a new line for this item. Printed in three colors, it carries animal decorations similar to those on hangers.**



The old package is a simple die-cut folding paperboard box. Both sets are still being sold, but the improved new package commands a higher price for the product itself and has greater appeal as a children's gift item. ▶

Baby Hangers

A package that has plenty of gift appeal for grown-ups shopping for children's items

For good, sound merchandising reasons, a new line of clothes hangers for children produced by Acme of Brooklyn is being packaged in a way completely different from the company's regular line.

The old set, still on the market in a simple die-cut folding carton that allows only the hooks of the six hangers to be seen, retails for $1.25 while the new set of six is planned to be a $2.00 item. This fact alone made it imperative that the two sets be differentiated from each other package-wise.

Another reason for the new package is the design of the new hangers themselves. While the old hangers are simple, one-color molded polystyrene, the new ones are two-color—each hanger decorated with a reproduction of a toy animal, with a different animal on each hanger.

The large, practically square set-up box adopted for the new sets is printed in three colors—the traditional pink and blue, with touches of black, against the white background. Within the pink square on the top cover are fanciful drawings of four animals: a chicken, a teddy bear, a bunny and a duck. The animals are designed in blue, white and black and one drawing appears in each corner. A center wreath design encloses a scalloped white circle in which apppears identification for the product. Sides of the box carry a looped cord design with various animals.

The inner paperboard tray which holds the hangers in place rests flat against the bottom of the box. Three score-lines at the left and right provide the tray with squared, raised edges. These have circular die-cut openings into which the rounded edges of the hangers fit, to keep them from shifting. The die-cut openings are so spaced that the hangers are held just the right distance apart to show the animal figures on their surface to best advantage.

The new package not only sets off this more decorative set of hangers but also makes it more suitable for gift giving as a definite children's item—an important merchandising consideration for this type of product.

CREDITS: *Package design, Phil Durham & Associates, Rosemont, Pa. Containers, Miro Container Co., Brooklyn.*

CONTOURED

Recent advancements in the high-speed forming of sheet plastic materials into a wide variety of shapes hold important implications for packaging. Working with cellulose acetate, ethyl cellulose, methyl methacrylate, vinyl resins and other slow-burning materials, it is now possible to achieve rapid, economical production of sparkling "tailor-made" packages which are contoured closely with the shape of the product and support it firmly within the container without supplementary anchoring devices.

Although sheet plastic containers have enjoyed growing acceptance during the past few years, a large percentage of the rigid packages have been fabricated by creasing, bending and the use of adhesives. While the plastic set-up box or straight fabricated container will continue to fill a distinct packaging need, the contoured package promises to find many applications in which a highly individualized treatment is desired, for special form-fitting shapes.

One patented sheet-forming process, which has been licensed to a number of manufacturers in the United States and Canada, enables the manufacturer to produce packages in thicknesses ranging from 0.005 to 0.125 in. The specially developed equipment employed permits a variety of packages from very small units to formed plastic containers of considerable size.

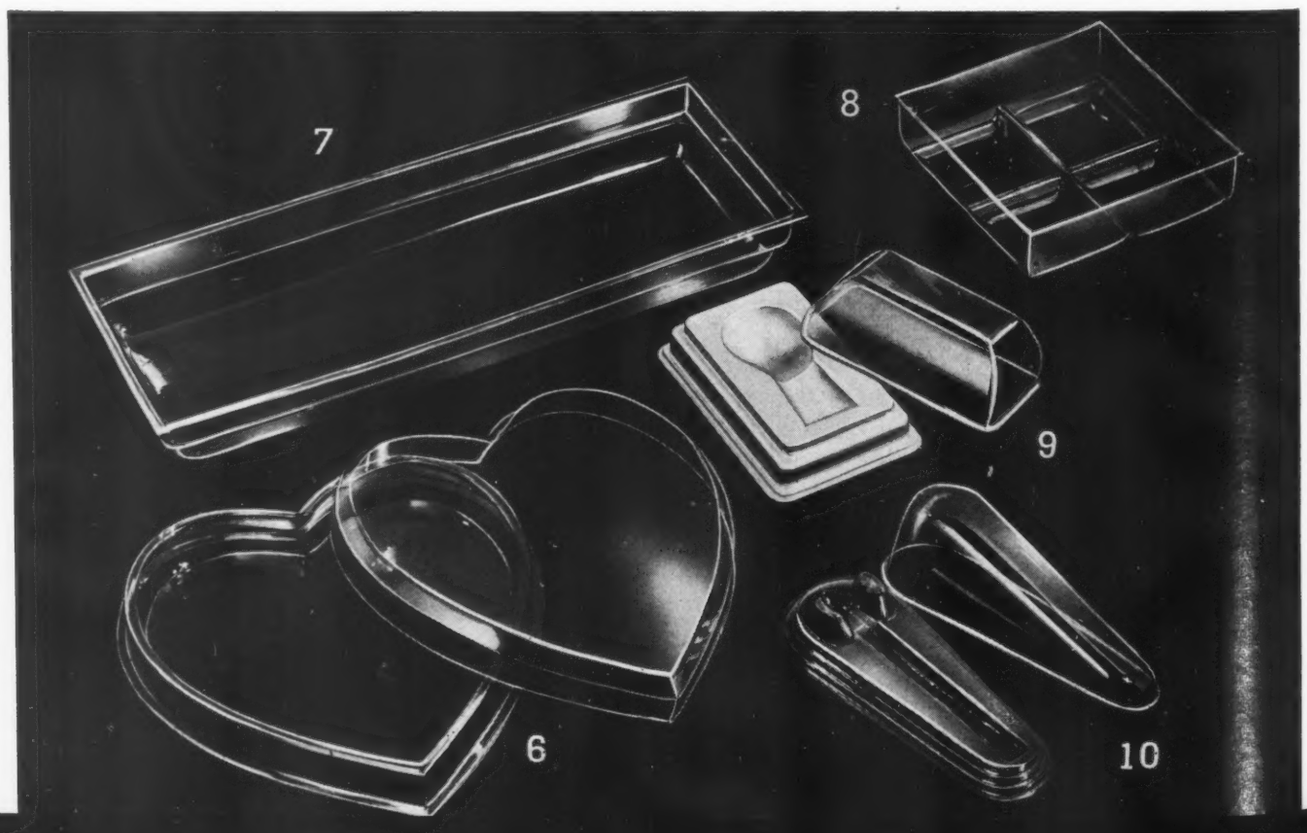
Working with formed plastic packages, the designer has an opportunity to exploit contours and designs far beyond the scope of traditional packaging mediums. Deep drawn containers unmarred by seams or packages with recesses, pedestals and bosses may be formed without difficulty. If he so desires, the designer may work in ovals, squares, diamonds, hearts or other novelty shapes, thus individualizing the package and enhancing its merchandising appeal. The tasteful combination of colored, opaque and translucent materials in bases and tops offers further interesting possibilities.

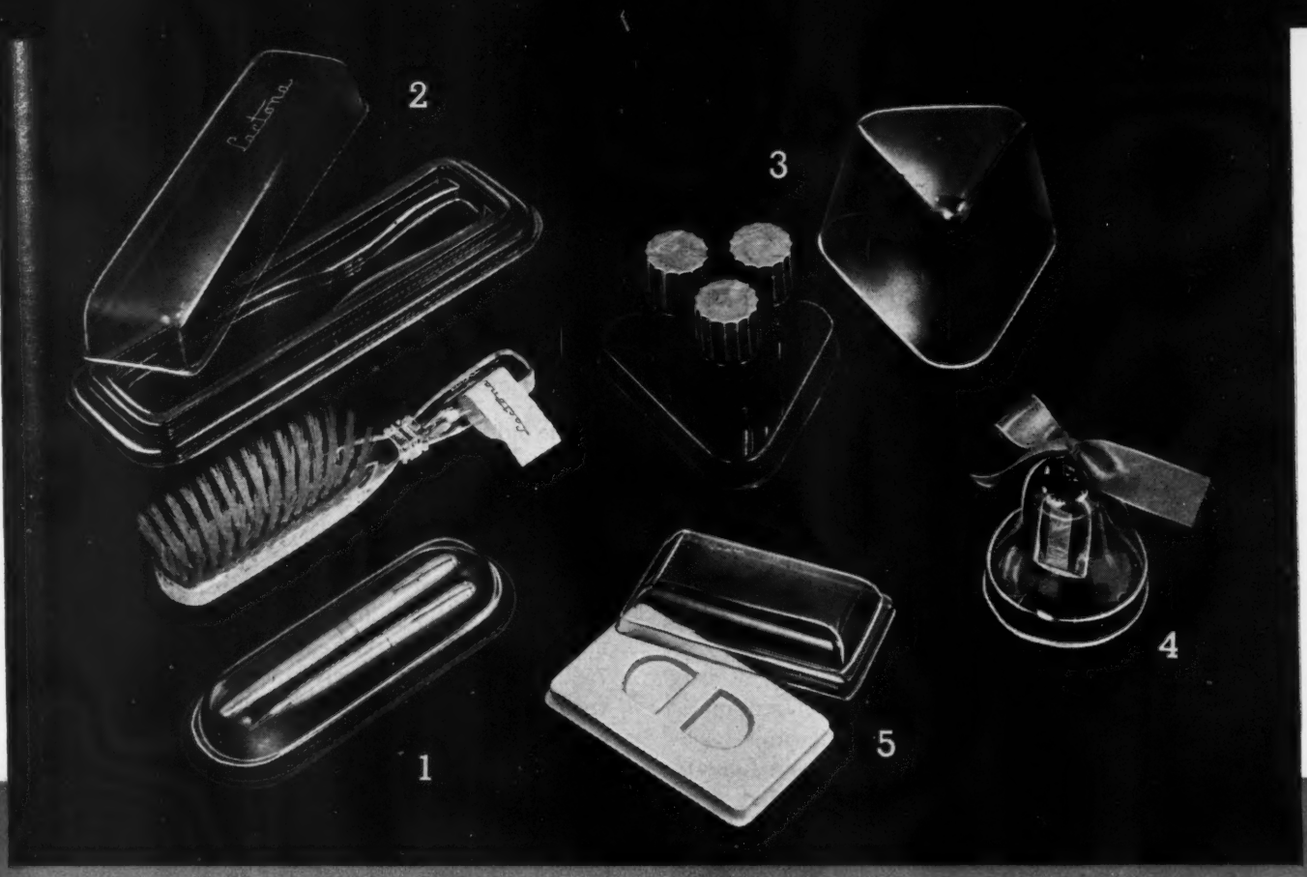
Packages may be formed having sufficient accuracy that the slip fit between top and bottom sections is virtually dustproof. Also, containers may be so designed that the product slips into them with a friction fit, permitting the shipment of merchandise in the package without displacement during transit. The packaging prospects for such items as combs, brushes, pipes, etc., are readily apparent from the accompanying illustrations.

In the development of this forming process special attention has been devoted to the testing of earlier and more recent plastic sheet materials, since optimum molding techniques vary according to the characteristics of the material itself. Speed of production is said to offset to a great extent the cost of the packaging materials required. For example, one type of formed unit measuring $2^1/_2$ by 7 by $^5/_8$ in. deep is now being molded at a rate of 1,000 pieces per hour, producing a desirable container of interesting design and excellent performance rating. This production rate, it is stated, can be stepped up two- or threefold with little difficulty, if the higher production speed is desired.

Presses employed in this forming process are of the air type, designed and made by the licensing firm.

Intricate shapes and sections are possible with high-speed forming. Numbers are key descriptions in story.





...sheet plastic containers, formed as fast as 1,000 an hour

Treating equipment consists of specially designed heating units which have proved satisfactory in the treating of the sheet plastic materials prior to forming. The molds, made of composite materials, are said to run approximately one-tenth the cost of conventional compression or injection type molds on the average job.

The fact that expensive preliminary tooling work is unnecessary permits a manufacturer to make a choice from several trial designs or ideas before going into large-scale output. The nesting feature of the formed containers means important savings in shipping space as compared to the usual style of fabricated package.

Packages shown in the accompanying illustrations represent only a few examples of the containers and products which may be handled under this process of plastic sheet forming. However, because of their variety, they provide an indication of the wide latitude open to the designer when working with this medium.

Some of the packages shown, such as the pen and pencil set holder (No. 1 in the illustrations), display the combination of a colored base and transparent dome, making the unit a virtual miniature display case. Recessed cavities are molded in the base.

The pipe box (10) is an example of a form-fitting package which carries out the lines of the product and also serves as a pipestand and cover. Supporting pedestals molded in the base support the pipe.

The bell package (4), designed to hold a dainty bottle of perfume, is molded of two pieces of 0.010 ethyl cellulose sheeting. The bottle is suspended from inside.

An excellent example of a form-fitting box is the hair-brush package (2) with molded base to fit the shape of the brush handle. This feature keeps the brush in position during shipment and prevents shifting of the product while on display. The dome is a press-fit following the contours of a streamlined shape.

A deep drawn container with cavity base is illustrated by the triangular perfume package (3). The perfume bottles fit snugly into recesses formed in the colored base, while the transparent cover has a slip fit, producing an attractive package of unusual design.

Another container with snug-fitting cover is the two-cavity package (5), the cover of which is formed with a step which controls the position of the cover over the base. This friction fit prevents dust from entering the package and also permits handling of the container without removal of the cover from the base.

The large rectangular cover (7) has a variety of applications and can be used in conjunction with paper or plastic base units to suit individual requirements.

Typical of the cavity-type package is the shaving brush box (9). Here the shaving brush handle fits firmly into a recess and the cavity is so designed that it will not touch the bristles, shielding them from distortion during shipment and display. What may be accomplished in the way of unusual shapes is shown by the graceful heart box (6), adaptable to the packaging of candy, cookies and numerous other products.

The four-unit box (8) is ideal where a multitude of products are to be sold as a unit. The individual items have their own display case.

Although the basic (*Continued on page 160*)

VERSATILE LINES

Grove Laboratories demonstrate ingenuity in equipment features which permit adaptation to wide variety of products and packages

The packing problem of Grove Laboratories, Inc., St. Louis, an outstanding proprietary drug manufacturer, is complicated not only by the wide variety of products handled—including tablets, tonics, ointments and suppositories—but also by the necessity of producing the same product in as many as three different packages to meet peculiarities of the national market or economic demands.

Their solution to packaging simultaneously 10 drug products has come through adaptation of automatic equipment to the product—rather than tailoring a package to fit the equipment. Almost all Grove Laboratories products are long-established, accepted drug items which customers demand in their original shapes and colors. Therefore, packaging policy has been guided to maintain as nearly as is feasible the recognition features of famous containers familiar to the public for more than 50 years.

Grove Laboratories, Inc., manufacture Grove's Cold Tablets, Laxative Bromo-Quinine, Grove's Chill Tonic, Pazo Ointment, Pazo Suppositories, Dr. Porter's Oil, a number of vitamin packages, JitterBug, a new insect repellent, and a new lotion deodorant, Kare.

The oldest of these are Grove's Tasteless Chill Tonic, which won popularity in 1888 through lack of bitter taste; Laxative Bromo-Quinine and Dr. Porter's Antiseptic Oil, which followed a few years later. Pazo Ointment, a leader as well, is in such demand that it is necessary to produce it in suppository, tube and tin form. All initially hand-packaged, each product is now either entirely packaged by machinery or at least 75% thus packaged largely on the same equipment with variations introduced by C. F. Schokmiller, plant manager who is also in charge of packaging.

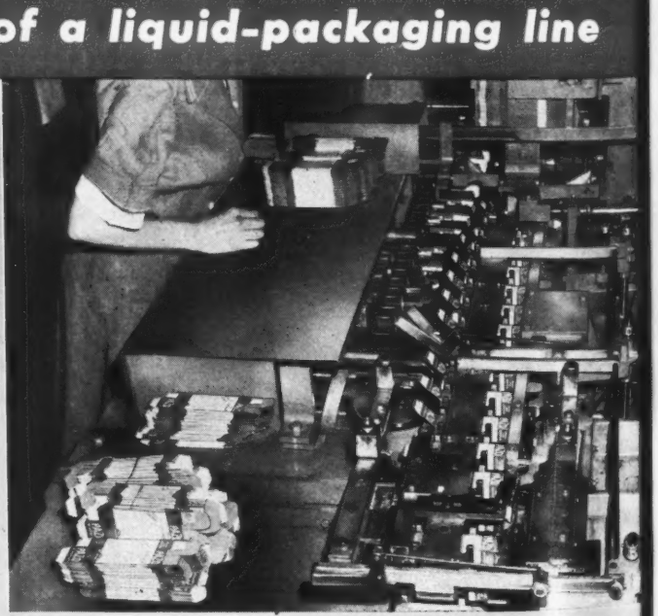
Ten packaging lines in the Grove plant are divided into (1) single purpose lines and (2) those capable of quick adaptation to variegated packages. Tablet production is confined to a large first floor room while ointment and liquid packaging, also requiring infinite care in mixing and checking, is on the third floor.

Tablet packaging

A look at the tablet packaging room reveals many innovations which Grove Laboratories have developed through practical experience. Here, where Grove's Cold Tablets are packaged, there are five production

TUBE FILLING... *makes use of a liquid-packaging line*

1. This is a tube-filling machine for Pazo ointment. It is set half way down the chill tonic line and connected with it by a short conveyor belt running at right angles. Production of tubes on this line is 125 gross per day.



2. Two trainees slip pile pipe, circular and tube of Pazo into conveyor buckets feeding into this cartoning machine. Closed cartons move along conveyor to casing operation, where they are packed in dozens and case-sealed.

lines each consisting of two tablet-forming machines connected side by side by conveyor rails with a cellophane wrapper and a bundle wrapper.

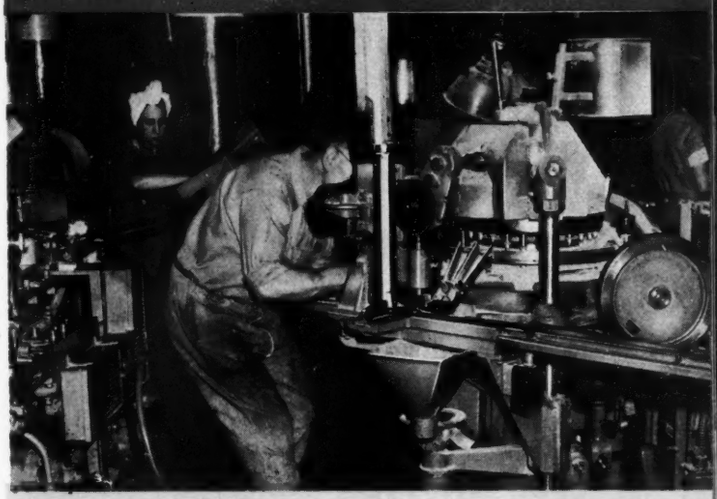
The means by which the tablet-forming machines combine the three operations of counting, forming and placing tablets in the box is an ideal example of Grove Laboratories' packaging ingenuity. Unlike other tablet manufacturers who merely produce tablets in bulk for later packaging, Grove has been unwilling to put up with time-wasting extra handling and duplicated effort. Therefore, changes in the standard tablet-forming machine were made to cut in half the usual handling time.

Each tablet line may be set to produce boxes of 12, 20, 36 or 40 tablets by means of changing the number of punches on the rotating unit to the same numbers and re-synchronizing revolutions with the motivating mechanism which inserts boxes from a gravity feeder, slides them open for filling and imprints lot numbers. Changes made in the power head of the machines combined with addition of special controls to provide synchronization—while limiting the number of press punches to the exact number of tablets desired in the boxes—prevent mistakes. Thus each revolution of the machine produces two boxes of perfectly formed tablets which are automatically counted. A vast amount of time is saved over bulk production and separate counting and packaging, according to Grove's packaging experts. This permits the tablet lines to meet heavy seasonal production schedules with a minimum of waste time.

Tablet production figures are over 300 gross per day per unit or about 2,000 gross per day in maximum seasonal operation. Granulated ingredients after thorough laboratory checking are brought to the forming machine hoppers according to a master schedule which incorporates various formulas for foreign consumption. Mexico, for example, insists on a particular formula, as do South Africa and other nations whose boards of health set up their own specifications.

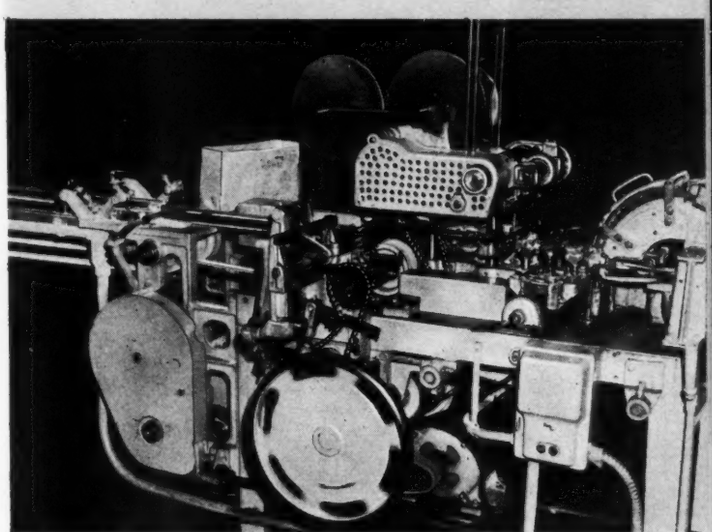
Boxes are fed to the tablet lines by towering gravity feeders which accommodate a gross at a time. The boxes are opened by the machine, stamped with a lot number, filled and passed to a girl who inspects the contents, inserts circulars and closes the sliding boxes. Conveyors from two tablet presses converge on one machine which selects one box alternately from each line for cellophane wrapping and transfers the boxes down a metal chute to the bundle wrapper which packages them automatically in dozens. Wrapped and glued packages are then placed by hand in shipping cases which are in turn passed through a case sealer. Five such units with production in loop form connect with a gravity conveyor which rolls sealed cartons to the shipping point. An interesting point in connection with this operation is that the three girls who staff each line change jobs every hour to avoid monotony.

There are two deviations in tablet packaging. Grove Laboratories also packages cold tablets in dozens in display counter cartons which are packed by hand. Also,

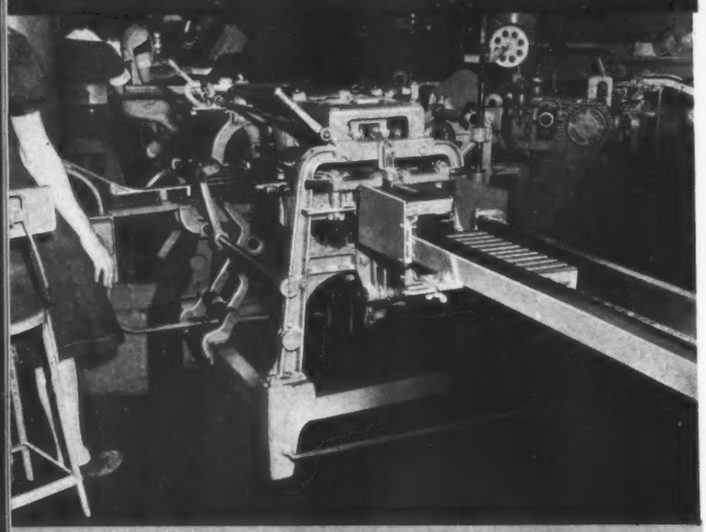


3. Grove's principle is to adapt machinery to package, rather than package to machine. This standard machine has been altered to form, count and package cold tablets in quantities of 12, 20, 36 or 40. Quantity is regulated by number of punches; photo above shows changeover being made. Revolutions are synchronized with the crank arms.

4. Two tablet-forming machines (left and center background) are arranged to feed into a single conveyor line of wooden slides, passing the boxes alternately into the CM-1 cellophane wrapper seen in the foreground.



5. Close-up of another type of cellophane wrapper, the AA model, also used in the cold-tablet line to overwrap unit packages. Production can reach 2,000 gross per day.



6. Individual boxes are conveyed to the bundle wrapper, which packages them automatically in dozens in a plain gray wrapper. There are five of these on the line.

7. Over-all view of portion of tablet-packing room, showing conveyor on which all five packaging units discharge filled shipping cartons, ready for case sealer at rear.

8. For foreign markets, tablets are packed two, three or four in printed glassine envelopes by this machine. The cold tablets are brought to the machine in 50-lb. cans.

for foreign shipments an envelope machine which packs up to 60,000 glassine envelopes per day is used. Envelopes are printed in the appropriate foreign language and contain two, three or four tablets each, as required. The single machine can be operated anywhere independently of the main tablet packaging room and is used only for foreign orders.

Liquid packaging

The U-shaped line on the third floor on which Grove's Chill Tonic is packaged is a good example of the company's technique with liquid products. Due to the fact that this tonic is a suspension rather than a solution it is necessary to mix the fluid by agitation up to the actual moment of filling the bottles. This has been made possible by the adaptation of a standard filler unit. Ingredients for the tonic are piped directly to one of two copper tanks accommodating around 75 gallons each directly over the head of the line. Both tanks contain special agitators of the paddle type which actually mix the Chill Tonic upon its arrival at the line. The stainless steel tank on the filler feeds from the bottom the tonic mixture which is again agitated by paddles within. Only with this method has it been possible to maintain rapid packaging production with the capper, labeler and bottle-cartoning equipment.

This line fills bottles which are metal capped, labeled, wrapped in a roll of corrugated paper, passed through a cartoning machine and then to the carton conveyor belts which carry the cartons to the case-sealing equipment. The only hand operation on the Chill Tonic line is the filling of shipping cases which are then released to roll into the sealing machine which is synchronized to accommodate the output of the filling equipment.

Production on this line is rated at 100 bottles per minute but this amount is exceeded frequently under large order conditions. Constant checks are made at each station along the line by laboratory technicians. Included in the labeling machine is a device worked out by Mr. Schokmiller which prints a lot number on every label as a control.

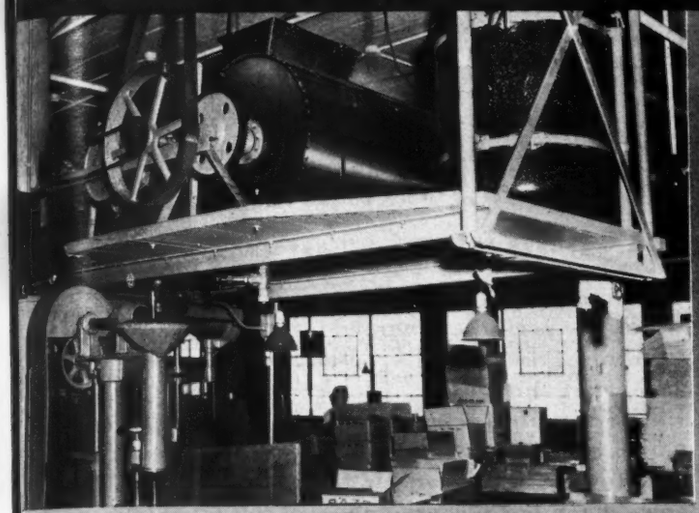
To the left of the Chill Tonic line is a similar line which is equipped for Dr. Porter's Antiseptic Oil. This product is packaged in $1^1/_2$-, 3- and 8-oz. bottles. The equipment packages the healing oil at the rate of 125 gross per day and includes machinery for applying primary sealing discs to the top of the bottle to prevent seepage of oil in the ultimate carton. An automatic roller applies the seal adhesive directly ahead of the capper which applies a threaded metal cap with the sealing disc already positioned inside. This unit is removable when the line is adapted for other products.

Tube packaging

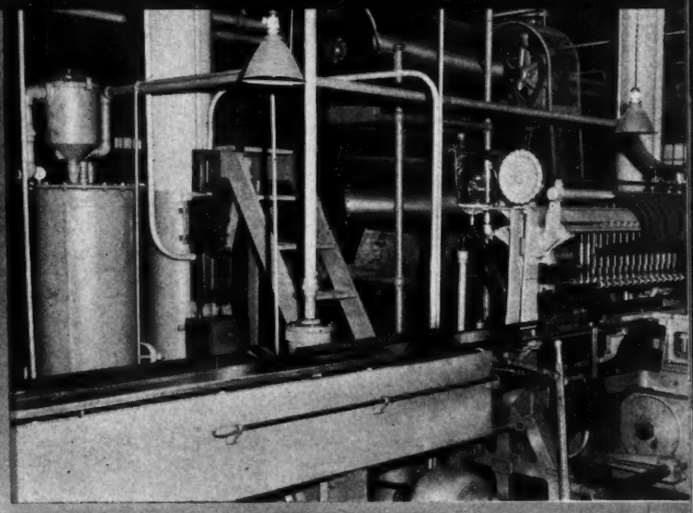
Easily the most versatile line in the packaging department, this U-shaped line may likewise be utilized for packaging Pazo Ointment in tubes by means of a tube filler set up to the left of the labeler and connected with the original line by a 90-deg. belt conveyor.

Due to the large volume of sales of Pazo Ointment in

LIQUIDS...filled from tanks with built-in agitators



9. Head of one liquid packaging line, which is used also in part for tube ointment packaging. Two horizontal tanks, with agitators, are used for chill tonic; vertical tank is used for the healing oil line. Below is bottle capper.



10. Filler unit at head of main chill tonic line. Note two tanks, one above other, in which suspension is agitated; behind filler unit is a connecting smaller tank, agitated with paddles, to maintain mixing at filling.

tubes, Mr. Schokmiller undertook an exacting synchronizing job to time the output of the tube-filling machine with the cartoning, carton closing and insertion sections of the main line. Some hand work has been required. Grove Laboratories have capitalized on this necessity by assigning new packaging department trainees to the job of positioning pile pipes in the conveyor slots for insertion into the package together with tube and circular. New girls become familiar with the equipment in this way.

Production of the Pazo Ointment tubes is 125 gross per day. Tubes as filled are imprinted with a lot number at the base by the same unit which drops them onto the belt conveyor. They are carried seven feet to the main line. Here each tube drops into a conveyor bucket which carries it through the cartoning machine. A circular is wrapped around each tube and the pile pipe is added. Cartons, closed, travel around the bottom of the U-shaped line on 10-in. conveyor belts to the end where they are packed in display containers of one dozen and finally in shipping cases. The latter are switched to the case-sealing unit which likewise is adaptable to either line for final sealing and palleting. The job of filling shipping cases with cartons is entirely hand work in each operation.

A serious problem in the packaging and production of Pazo Ointment in suppository form was the melting of the cones, which are made with a cocoa-butter base, in St. Louis's notorious summer heat. With increased demand for this product the packaging engineers enclosed a 45- by 15-ft. space in the rear of the third floor with insulated double walls and glass block windows and moved the complete suppository line into this space. Air conditioning down to 72 deg. is supplied by a five-ton York unit which, due to excellent insulation, provides 40% fresh air for the 10 to 12 girls who operate the suppository line. Suppositories are formed by an automatic machine after which they are individually foil-wrapped by an imported machine at the rate of 120 per minute. The foil wrap permits the suppository to retain its cone shape even when exposed to warm weather although druggists are warned to keep them in a cool place. They are packed by hand, 14 to a box.

So much success has been achieved with the "trading jobs" innovation adopted on the tablet packaging lines that each employee is trained to switch from one position on the lines to another—at her own request in most instances. This also fits in well with Grove's employment plan to provide every employee continual employment five days a week, eight hours daily. This provides an ample source of trained personnel for rush production whenever necessary. Lines average from four to 12 workers depending upon the product, hand operations involved, etc.

CREDITS: ***Cold tablets***—*Tablet-forming machine (3),* F. J. Stokes Machine Co., Philadelphia; cellophane wrappers (4) and (5) Package Machinery Co., Springfield, Mass.; bundle wrapper (6), Package Machinery Co.; case sealer (7), Standard-Knapp Corp., Portland, Conn.; glassine envelopes, Tension Envelope Corp., Kansas City; envelope-filling machine (8), F. B. Redington Co., Chicago.* ***Liquid filling***—*Filling machine (10), Pneumatic Scale Corp., N. Quincy, Mass.; capper (9), U. S. Bottlers Machinery Co., Chicago; McDonald labeler, Pneumatic Scale Corp.; cartoning machine, F. B. Redington Co.; case sealer, Standard-Knapp Corp.; Filma-Seal closures and machine for Dr. Porter's Oil, Ferdinand Gutmann & Co., Brooklyn.* ***Ointment***—*Tube-filling machine (1) and tube lot-number imprinter, Arthur Colton Co., Detroit; tube cartoner (2), F. B. Redington Co.; suppository-forming machine, Arthur Colton Co.; foil-wrapping machine for suppositories, Forgrove (England); ointment filler and weigher for tins, Stokes & Smith Co., Philadelphia; labeler, New Jersey Machine Corp., Hoboken; case-sealer, Standard-Knapp Corp.*

* Numbers in parentheses refer to illustrations in which these machines are shown.

MP DESIGN

HAND-BLOWN STOPPERS

Statuette stoppers in the shape of exotic birds for which the perfume is named form the closures for Parfums Tresor bottles. Both bottles and clossures are hand blown. The set-up boxes in which the bottles are packaged are covered with flocked paper, a different color being used for each scent—blue for Cygnet, green for Jabiru and red for Silene. Each box has an embossed foil label affixed to the center of the front panel. The labels carry a silver reproduction of each bird against a background similar in color to the box itself. Silver also accents the top edge of the box and its base. The boxes themselves are packaged in paperboard containers overwrapped with specially designed paper. This design—the Tresor name along side of a drawing of pirate figure and treasure chest—also carries out the particular color of the perfume box against a white background. Tresor also has colognes packaged in the trademarked overwrap and sealed at each end with the colored foil labels. New scents to be added will follow the same theme.

BRITAIN VIES WITH AMERICA

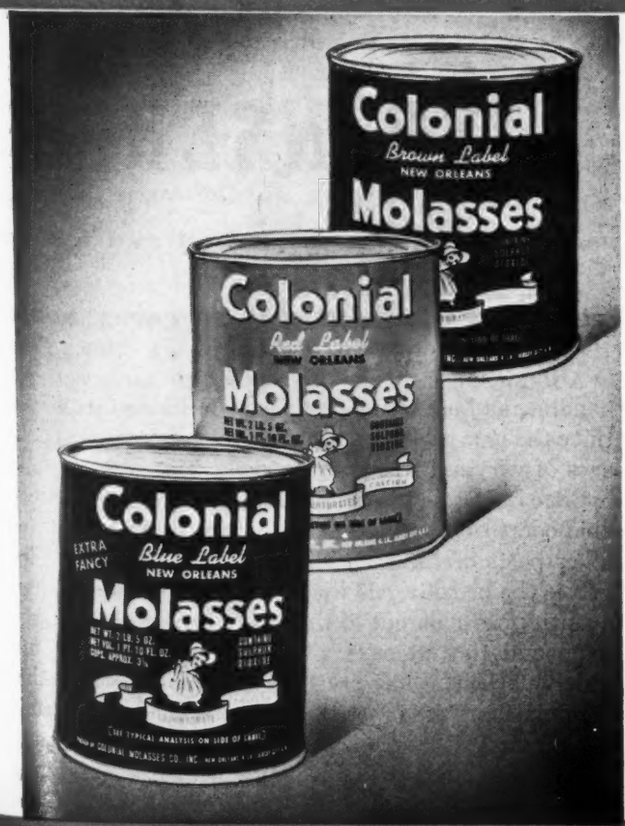
Competition from well-designed American ink packages prompted a complete redesign of Britain's John Bond container. Because the old package for John Bond's Marking Ink had become so familiar to the British during its more than 100 years of use, its redesigning was a rather bold step. The problem was to create a new design which would have shelf appeal without losing the character of the original long-established label. These photographs show how the package has been modernized. A new round container has been selected and a simplified label does away with the old cluttered look and emphasizes a central motif. In addition to the name of the product, the only other copy retained is the slogan, "Prepared by the daughter of the late John Bond," and the instruction, "Requires no heat." Lettering is in reverse white against a black background. Through the center of the design is a scarlet band.

Credit: *Design, The Design Group, Ltd., London, Eng.*

HISTORIES

BRIGHTER SUNSHINE LABEL

Redesign of the 45-year old Sunshine Krispy Cracker package is another significant indication of the importance large companies are attaching to details of package appearance to meet today's merchandising requirements. Design changes are subtle yet the new package presents a more modern appearance. The Sunshine name now is centered in a straight line across the top and front panels. The trademark, figure of a cook, has been transferred to the left and stands out more clearly than on the old package, where the product name partially covered it. Lettering of the placard held by the figure is easier to read. Copy formerly on the left of the front panel has been switched to the right, below the color patch giving contents weight. The patch, however, has been lowered here as well as on the top panel to line up with the Sunshine name. "Krispy Crackers" appears in bolder lettering. Design of the end panels is the same, but copy has been revised. Trade name is above and product name below.



NEW COLOR IDENTITY

Colonial Molasses Co., Inc., now identifies each of its three types of molasses by color labels. To give a closer tie-in with Red Label and Blue Label brands, the product formerly known as Diamond C is now called Brown Label brand. The over-all color of each label has been made to correspond with each brand name, making each more easily identified by the consumer. Product and brand names are closer together so that "Colonial Molasses" instantly meets the eye. Each label has a yellow color block on the back listing the three types of product and their uses, designed to promote sales of each. Another color block informs the consumer of the nutritional value of molasses by carrying a typical analysis of the product. In addition to giving the weight contained in the can, the quantity is also stated in cupfuls—which is usually the housewife's cooking measurement.

Credit: *Labels, Muirson Label Co., Inc., Brooklyn.*

Telescoping inner and outer sections of formed sheet plastic, with molded plastic base and top, distinguish new Odac air freshener. Glass jar inside holds fluid, which is dispensed through felt wick. Brand-marked by foil labels, unit comes pre-packaged in paper cannister.

PHOTOS, O-CEDAR CORP.

Components of the air freshener. The glass jar (right) has a perforated metal cap, sealed with a cork through which the wick is inserted.

GLASS-PLASTIC DISPENSER

O-Cedar's air freshener also uses paper, metal, cork, foil and felt in unusual functioning package, ready for the customer to carry home

The effective combination of a variety of packaging materials to achieve adequate product protection during shipping and handling, strong merchandising appeal and controlled dispensing of the product is strikingly exemplified in the unusual new package developed for "Odac," an air freshener manufactured by O-Cedar Corp., Chicago.

Produced by the Odac Division of O-Cedar, the package includes an inner glass container, a formed sheet plastic dispenser with molded plastic base and top and a spirally-rolled chipboard paper-end can which acts as the outer package. Application of each of these materials to the over-all packaging problem was based primarily on their individual functional role in the handling and use of the product. Because of its versatility the new package supplants several previous packages of varying vaporizing capacity.

Odac is a liquid having the ability to dispel objectionable odors originating in the kitchen, bath, closets or other parts of the home. Its effective application involves the use of a felt wick which exposes a sufficient quantity of the liquid to the air. Since the size of the room and the intensity of the undesirable odor are widely variable, some practical method of accelerating or diminishing the vaporizing action of the fresh air unit is necessary. Thus, according to Charles Dupuy, manager of the Odac Division, the basic packaging problem was to maintain the full strength of the Odac

solution indefinitely under storage conditions, yet construct the package in such a way that its odor-dispelling action could be "metered" according to needs.

With these factors in mind a 16-oz. taper massage cream jar, with standard C. T. metal cap and synthetic rubber sealing ring, was adopted as the primary container. The caps are punched in the center so that they taper inwardly and have a $^3/_{16}$-in. flange on the inner surface. They are tightly applied to the jars, after which the Odac liquid is filled through the center opening and the latter closed with a cork. Printed directions on the round paper label atop this inner container caution: "Never unscrew cover on jar."

The die-cut felt wick and circular top pad are laid on top of the capped jar, which is placed within the plastic dispenser. This unit consists of a molded plastic base; cover and walls are 0.020 blue vinyl sheeting. The dispenser is made in two telescoping sections, the slotted upper sleeve being of slightly smaller diameter than the lower so that it may be shifted up or down to regulate the rate of vaporization. The fit between the two cylinders is critical since the upper sleeve must remain in any desired position. The sheet plastic tubes, formed over a mandrel, are heat sealed at the lap seam and cemented into grooves in the base and cover.

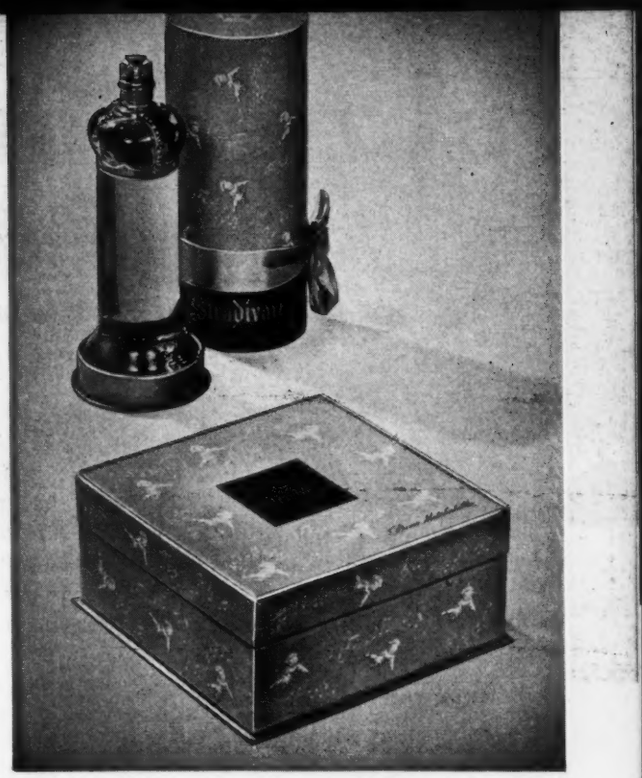
The base of the dispenser is designed with four sturdy legs of sufficient strength to support the weight of the filled inner bottle during shipment and in normal use. The cover piece includes an integrally-molded hand-lift knob by means of which the position of the sliding upper tube is adjusted. Both the base and cover section are injection molded of ivory vinyl.

The plastic dispenser with its interior bottle is packed in a silver-colored, spirally rolled paper-end can with glued bottom cover. A corrugated pad is placed beneath the plastic base to reduce shipping hazards and a corrugated sleeve provides additional inner protection. Then the drawn paper cover, having a friction fit, is applied and the units are cased for shipment.

To place the Odac air freshener in operation the housewife removes the lid of the outer container and takes out the plastic dispenser. Sliding out the top sleeve, she next withdraws the inner bottle, pulls out the cork and inserts the double wick through the punched lid opening, placing the flat wick pad on top of the jar lid. Then the bottle is returned to the plastic dispenser, the upper sleeve replaced and the unit is ready for use. Raising or lowering the sleeve changes the position of the die-cut slots and meters out the odor-killing action of the liquid.

Attractive gummed-back aluminum foil labels, printed with blue background, are applied to the inner jar, along the seams of the dispenser sleeves and on the outer paperboard container. They provide complete product identification during display and use.

CREDITS: *Jars and metal closures, Hazel-Atlas Glass Co., Chicago. Corks, Sommer Co., Chicago. Molding and fabrication of plastic dispenser, Cruver Mfg. Co., Chicago. Plastic material, Vinylite, Bakelite Corp., New York. Spirally-rolled paper can, W. C. Ritchie & Co., Chicago. Labels, Arcadia Label Co., New York.*



NEW SPRING ENSEMBLES

Two new gift packages have been added to the Prince Matchabelli spring line. Companion items to Stradivari perfume are Stradivari toilet water and dusting powder, both packaged in rose-colored boxes covered over-all with violin-playing cupids with crowns on their heads. The identifying sceptre bottle is used for the toilet water.

Three popular items in the Duchess of York sequence—a sceptre bottle of cologne, a sceptre bottle of talc and a miniature crown bottle of perfume—are housed together in an aqua box and called Royal Ensemble.

FROZEN FOODS

by WILLIAM RABAK*

Review of requirements and a laboratory report on a new dip-coat package which promises protection against storage deterioration

In seeking the ultimate in the protective packaging of processed foods, man has drawn richly from the examples of nature. But in emulating the techniques of nature he has sometimes failed to duplicate with sufficient care the devices of natural protection. In many cases this has resulted in spoilage and economic loss. But what is natural protection? Just what are the protective devices that man seeks, or should seek, to imitate?

True function of packaging

Growing edibles are naturally protected by ingenious armors which guard the inherent nutritive qualities against premature deterioration. A careful examination of the natural protective barriers of fruits, seeds and nuts will reveal the meticulous adaptation of the covering to the edible portion. In the case of such fruits as apples or pears, this covering consists primarily of a thin coating of water- and moisture-resistant waxes which permits respiration but retards water-vapor losses during this process. Seeds and nuts are encased in shells which not only supply protection against mechanical injury of the inner contents but also, in most cases at least, against insect penetration. A few of nature's products have a double wrap—the peanut, for example. In all instances the natural protection afforded meets requirements of stored-up food material.

In the past packers of frozen foods have sometimes been indifferent to the protective requirements of their product or have considered them of secondary importance, an attitude which may well be responsible for the lag in the investigative work on functional packaging in the frozen foods field. This lag has doubtless caused economic loss as well as some prejudice. Carefully organized packaging research is the answer to both loss and prejudice, for packaging is a means of improving and conserving food. As in nature, packaging is an integral part of the function of food preservation.

Three links in preservation chain

Food preservation may be likened to a chain consisting of three distinct but interlocking links. The first link is the growth or production of raw materials. The second, interlocked with No. 1, represents the processing of the raw material. Link No. 3 is the final one in the preservation chain—the protection of the processed material against deterioration. Thus the third link represents the protective package. This food preservation chain is only as strong as its weakest link. The weakest link decides the ultimate degree of success attained by the process of preservation.

When the third link in the food preservation chain is considered and the numerous hazards of spoilage kept in mind, it can be seen that the function of the modern protective package is intricate. To prevent deterioration and spoilage after commercial handling and processing, effective protective measures are necessary. Because the changes which rapidly take place after food processing are chemical, physical and bacteriological in nature, the accomplishment of efficient packaging depends upon the control of these factors.

The import of the chemical, physical and bacteriological involvements of processed foods can be appreciated when it is remembered that the living cells of the original product have been inactivated by processing. In processed foods we are dealing with inert organic tissues which require special protection not only against bacteriological activity but also against chemical and physical changes as well. In the final analysis it is the package that must be so designed as to supply this protection. It is, moreover, the deciding factor in the ultimate appearance, palatability and nutritive value of a processed food.

Foods are processed in many different ways—by

* Western Regional Research Laboratory, Bureau of Agricultural and Industrial Chemistry, Agricultural Research Administration, U. S. Dept. of Agriculture, Albany, Calif.

The meat of the cocoanut is sealed and protected, first by the inner shell and second by the outer tough husk.

milling, fermenting, heating, dehydrating and by freezing. Each processed food requires protection according to its special characteristics. For example, heat-processed foods require a package capable of being maintained in a sterile condition, such as is effected by hermetically sealed tin or glass containers. Dehydrated foods require protection against water-vapor absorption and contact with the atmosphere. Conversely, frozen foods require protection against water-vapor *losses* and contact with the air during freezing storage. The development of new methods of protective packaging has become necessary for these comparatively new foods.

The frozen food industry from its inception has been handicapped in procuring efficacious protective packages. Because the packers failed to emphasize their specialized requirements and the package manufacturers failed to appreciate the needs of their clients, the use of packages or packaging materials that were manufactured for other purposes has frequently resulted. Packaging frozen foods is a challenge to the ingenuity of package designers, since a new set of conditions must be met. To meet the problems inherent in the product and its handling and storage, practical cooperative research is necessary between the frozen food packer and the package supplier.

The frozen food industry has tended to use paperboard and other non-hermetical, non-metal containers for its products because packages made from these materials are distinctive and serve to accent the difference between frozen and heat-processed foods. Frozen foods are dependent upon low-temperature storage at all times to prevent spoilage. They are perishable commodities and the use of distinctive, comparatively impermanent containers emphasizes their perishable nature to the consumer.

That the retention of quality in frozen foods is to an appreciable extent dependent upon protection against moisture losses and contact with air during low temperature storage is a valid assumption verified in practical experience.

Packaging and moisture retention

It might well be pointed out in the beginning that the tendency towards the loss of moisture by frozen material is in accord with the natural law of equalization of humidities. The free air space that surrounds the frozen food within the package approaches 100% relative humidity because of the presence of ice. On the other hand, the atmosphere in the low-temperature storage space is usually far below saturation. This difference in vapor pressure between the inside and outside of the package explains the ready migration of water-vapor from within the non-hermetically sealed package to the outside atmosphere, the result of which is the desiccation of the product. The loss of water vapor is more or less constant and rapid, the speed of transfer being largely dependent upon the relative resistance of the package to the passage of water vapor. Hence the protective efficiency of the package is a factor

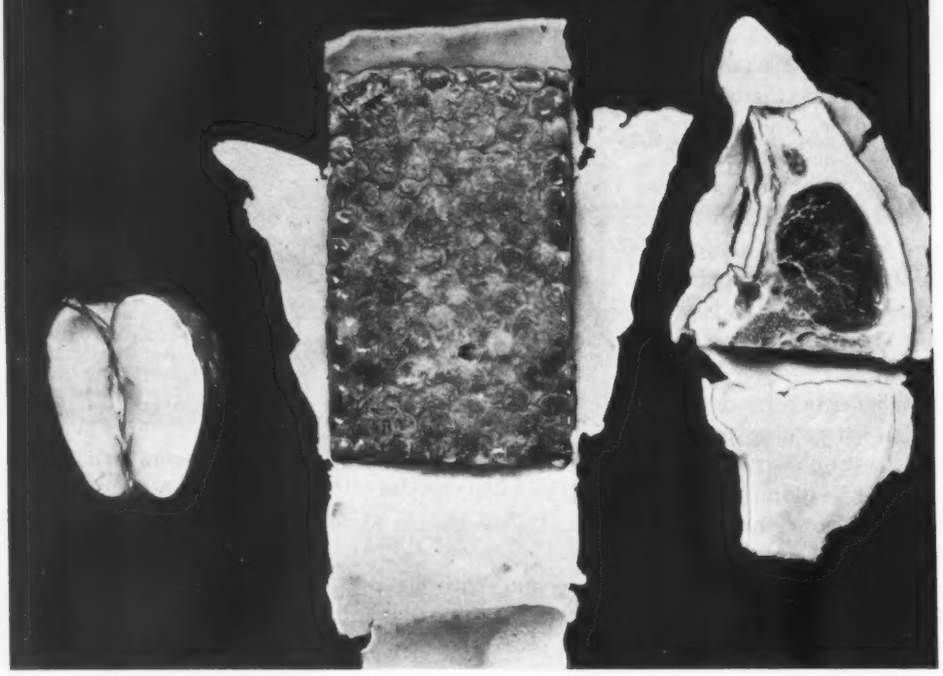
Fundamental soundness of the double-wrap idea is demonstrated by peanuts, with an inner skin and outer shell.

to reckon with in the storage life of frozen foods.

Of the factors that influence the loss of water vapor from protective packages at low temperatures, the following are perhaps of chief importance: (1) nature and type of the package or material; (2) duration of the holding period; (3) relative humidity of the storage space; (4) efficiency of seals; (5) velocity or amount of circulation of air in the storage space; (6) area of exposed surface of the package; (7) temperature fluctuations of the storage space and (8) temperature of storage.

In offsetting these factors, the degree of efficiency of water-vapor resistant sheets, such as rubber latex, rubber hydrochloride and moistureproof cellophane, is of concern to the frozen food field. The usefulness of all types of double-waxed and laminated paper sheets is also of interest. The effectiveness of double wrapping is yet another problem that has commanded the attention of the industry.

The investigations conducted on these materials is worth closer study. For example, it has been learned that the value of water-vapor resistant sheets of all types in frozen pack is dependent upon their relative resistance to the passage of water vapor at low temperature. Experiments have shown that a considerable variation exists in this characteristic between different sheets which have been subjected to similar treatments. Some double paraffin-coated sheets are more efficient than others even when the thickness of paraffin film is the same. Papers of closely "knit" texture appear to have an advantage over loosely "knit" paper stock. For example, the resistance to water vapor of such papers as parchment or others of similar quality is in part dependent on the density and other physical characteristics of paper rather than the thickness. The amount and kind of paraffin and the conditions governing application are likewise important factors. Virtually all waxed papers lose a great deal of their efficiency when they are roughly handled or sharply folded, since breaks in the continuity of the paraffin coating on the surfaces are the result. The



The natural skin of the apple (left) is imitated by the new thermoplastic dip-coatings being tested by the Western Regional Research Laboratory. The man-made coating is shown here stripped from a block of compressed frozen peas and from a frozen lamb chop. Material is tasteless, odorless

obvious method of guarding the efficiency of wax-coated papers is to handle them carefully during and after wrapping to avoid undue bruising and creasing.

Many packers of frozen foods have resorted to double wrapping to insure against moisture loss during storage on the theory that escape is more difficult through two walls than through one. Experiments have verified that double wrapping does markedly increase the efficiency of any moisture-resistant wrapping material.

The degree of protection afforded by water-vapor-resistant materials during low temperature storage of foods, however, must be specifically evaluated. It will not suffice to assume protection on the basis of tests made at room temperature, for some materials become brittle and crack or tear easily at temperatures well below freezing.

Sealing

Poor sealing of liners and overwraps has been found to be an inherent weakness in the packaging of frozen foods. An imperfect seal defeats the utility of the most efficient water-vapor resistant material. It is essential that the sealing operation be under careful scrutiny and control at all times. The use of material readily sealed by heat is desirable but this does not always insure against faulty sealing. The use of a sealed inner bag combined with a sealed overwrap is reasonable insurance against leakage, as very frequently one of the wraps may be defectively sealed and the second stops or at least retards the loss of moisture.

Freezer burn

The aim of freezing preservation is to retain the inherent quality of a food product by maintaining the processed product at a constant low temperature in order to inhibit deteriorative changes in the tissues. These changes may consist of chemical impairment with resulting loss of color, development of "off" flavors and destruction of vitamins—or they may be physical changes caused by escape of moisture from the product into the surrounding atmosphere. The latter phenomenon is generally known as "freezer burn." The areas of frozen foods thus affected are sometimes changed to such a degree that the foods cannot be properly reconstituted by cooking and hence become undesirable. Freezer burn can be avoided by effective packaging.

Protective packaging of peas

A collaborative study with a commercial packer to determine the efficiencies of various types of packages on quality retention in frozen peas led to the following conclusions:

1. Peas packed in paperboard packages with heat-sealed bag liners or overwraps and stored for 20 months at 15 deg. F. lost approximately twice as much weight as those stored at 0 deg. F. for the same length of time under reasonably constant conditions of humidity.

2. The extent of weight loss in storage is governed by the relative water-vapor resistance of the lining or wrapping materials and the sealing thereof. For short periods of storage the type of protective wrapping or lining material is not critical, but for longer storage periods only the most effective water-vapor-resistant wrapping or lining materials will prevent weight losses.

Dip coating—a possible method

Since the efficiency of any packaging material is to a great extent dependent upon the tightness of the seal, one is naturally led to conclude that the ideal wrap for frozen foods should consist of an uninterrupted film of

protective thermoplastic material applied as a dip coating directly to the frozen product or to the package containing it. Such a film, having the required chemical and physical characteristics, correctly applied, supplies a protection that approaches the efficiency of a hermetically sealed metal or glass container. The thermoplastic coating must be non-toxic, chemically stable, odorless, water-insoluble and suitably flexible at low temperatures.

Since many thermoplastic materials and mixtures are known to be resistant to water-vapor and air, exploratory investigations have been conducted at the Western Regional Research Laboratory, U. S. Dept. of Agriculture, to ascertain the value of this method of packaging in the protection of frozen foods. The preliminary results indicate the practicality of this method. The procedure is simple in that it involves only the coating of frozen food by dipping it in the molten thermoplastic mixture. Upon coming in contact with the cold surface of the commodity or the package surrounding it, the dip coating solidifies and forms a continuous protective film. The procedure eliminates the weaknesses of heat-sealed closures, supplies a barrier which protects the contents against contact with air and prevents loss of water-vapor from the product to the surrounding atmosphere. Frozen foods packaged in this manner retain quality and food value for long periods if stored at reasonably constant and low temperatures. The method reduces oxidation, prevents loss of moisture and minimizes the hazard of "freezer burn."

The most suitable and readily available types of dip coatings at the present time appear to be those with a plasticized paraffin base or some of the micro-crystalline paraffins. Exploratory experiments indicate that certain synthetic derivatives may be utilized in dip-coating formulas. Because (*Continued on page 164*)

ONE BIG FAMILY FOR DURKEE

An eight-year redesigning and repackaging program has recently been completed by Durkee Famous Foods, one of the units of the Glidden Co., Cleveland. Entailed in the program was the slow absorption of numerous regionally known brands which were gradually merged into the Durkee family.

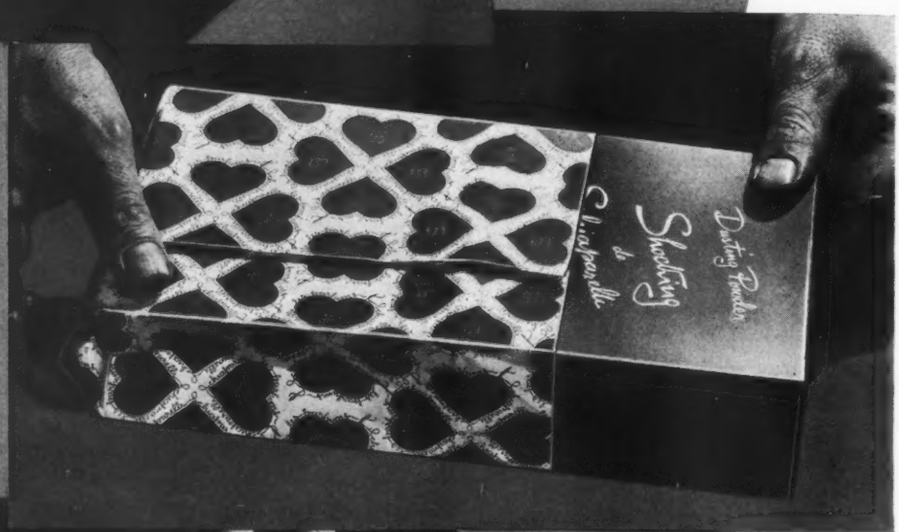
The design, which has won several packaging awards, now bears the familiar "Durkee" name in large red letters against backgrounds of white and green. Identification of the contents is carried in contrasting and harmonizing colors below the brand name. The hundreds of Durkee products, including Durkee's Famous Dressing, Worcestershire sauce, margarine, cocoanut and numerous spices, now carry this uniform appearance.

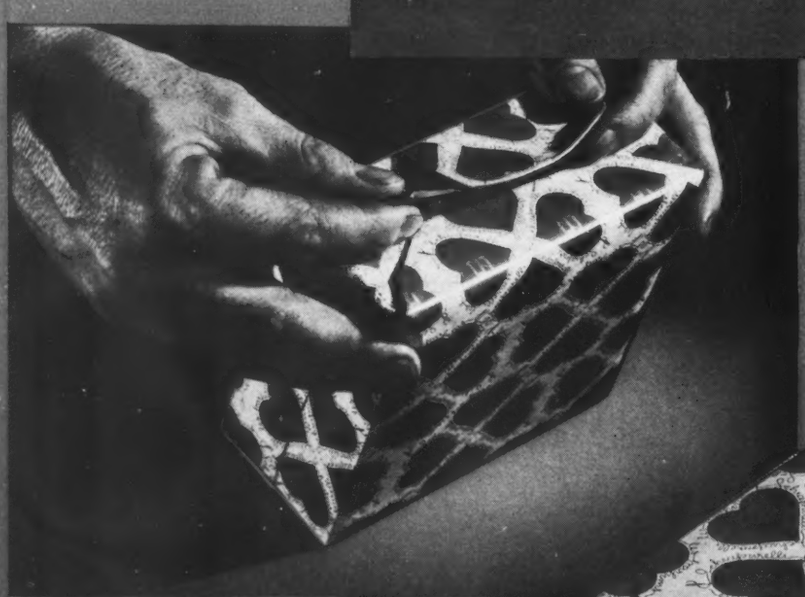
Spice containers are all standardized in shapes and sizes. Bottled dressings and the packaged margarine and shortenings have been similarly standardized and sharply identified. The entire program was undertaken, according to company officials, with an eye toward having each product help sell the other.

The Durkee nutmeg package, which won one of the recent *Spice Mill* competition awards, was illustrated in the September, 1946, issue of MODERN PACKAGING, page 125.

Preformed of customer's trademarked paper, wrap is made with gussets at each side and extra gusset at seam on the face.

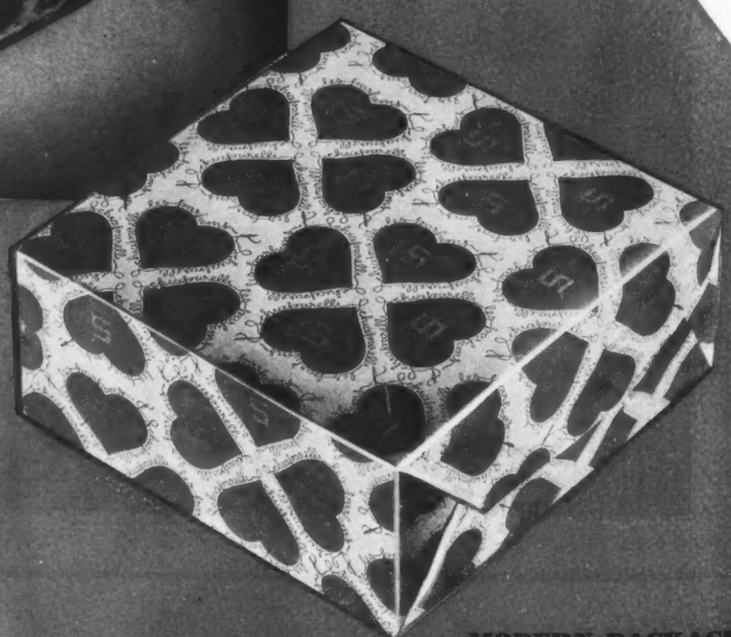
Box is placed in wrap in one single operation. Gussets permit expansion for easy insertion of box.





After box is in wrap, ends are folded over and secured either with pressure-sensitive tape or with decorative gummed seals.

The finished job gives the effect of close-fitting wrap, completed two or three times faster than an ordinary hand wrap.



BAG-WRAP

New method of preforming custom-made bags provides box wrap 2 to 3 times faster than by usual methods

To make a neat wrap for boxes and cartons by hand is not easy and it's slow. To train employees who can do this work is also a time-consuming job. For years both retailers and manufacturers who pack their merchandise in such a manner but whose volume does not warrant machine wrapping have been looking for short cuts.

When you see this new method of using preformed custom-made wraps recently adopted by a number of firms, you wonder why nobody thought of it before. It is actually not a bag, an envelope or a wrap, but a little bit of all three.

The method is this: The user is supplied with specially constructed bags made from his own trademarked paper stock. The principle of the construction is a gusset at each side and another extra gusset where the paper is seamed down the face side. These gussets permit the bag to expand for easy insertion of a box. The bags are made to the users' specified box dimensions so that when boxes are inserted, the bag is a tailor-made fit to each sized box. The bottom of the bag provides one sealed end of the wrap and the packer simply folds in the open end over the box and seals it with a gummed sticker or a piece of pressure-sensitive tape. The completed effect is that of a close-fitting wrap, sealed at both ends, with the side center gusset appearing like the fold of a wrap.

So far, these custom-made wraps are being most widely used in the retail trade, particularly in instances where there is a requirement for wrapping boxes of various sizes. Lord and Taylor, New York department store, is using such bags for wrapping several sizes of boxes and the finished packages look exactly like a hand-wrapped box in the store's gift wrap. The bag wrap assures a uniformly neat package.

Altman and Kuhne, New York confectioners, are using the bags made of their gold-printed trademarked paper as wraps for candy boxes. The same packaging idea is working out successfully for the packaging of bed sheets and table cloths. Several cosmetic houses are adopting the bag-wrap. A record company is using a trademarked bag of this type for the packaging of phonograph record albums.

Several of the chain drugs have used the bags for wrapping cartons of sanitary napkins. The merchandise can be wrapped during off-peak hours by inexperienced help, ready behind the counter when customers come in to make their purchases.

Time studies have been made to show how much wrapping time can be saved in addition to the advantages of the well-wrapped package which these bags provide.

In general, it has been found that the bag-wraps can be completed two and a half to three times as fast as a similar package wrapped in a flat sheet. This means only one third as many girls are required for wrapping by this method.

CREDIT: *"Auto-Wrap" bag-wraps distributed by Charles F. Hubbs Co., New York.*

Three examples of uses for the wrap. Top, Lord and Taylor gift box. Lower left, Altman & Kuhne candy box. Right, heavy kraft wrap for phonograph records.

1. Here insulating blankets are being rolled up by hand.

2. They are then placed by hand in bulky fibre cartons.

COMPRESSION PACKAGING

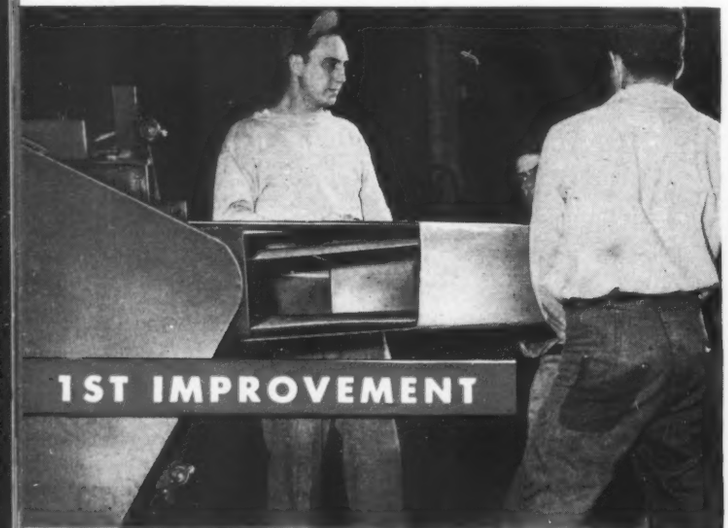
Owens-Corning machine squeezes air out of insulation, packs it automatically in bags

Fibrous glass of the type used for building insulation has two exceptional qualities that particularly recommend it: it is more than 98% entrapped air—the best insulator—and it is an extremely resilient, virtually indestructible material.

It is these precise qualities of the product that Owens-Corning Fiberglas Corp. engineers have capitalized on in simplifying and improving the packaging of Fiberglas building insulation. It is a remarkable example of ingenuity in reducing bulk—with all the savings that that implies—as well as amplifying consumer convenience.

Fiberglas building insulation is supplied as a long and narrow blanket, or batt, of glass wool in nominal thicknesses of 1, 2 and 3 in., contained between two strips of paper formed with a nailing flange on the edges for attachment to the house studding. The blanket generally is 15 in. wide. Previously it has just been rolled up and placed by hand in a corrugated shipping container—one roll (100 feet of the 1-in.-thick blanket) to a carton measuring 34 by 16 by 28 in.

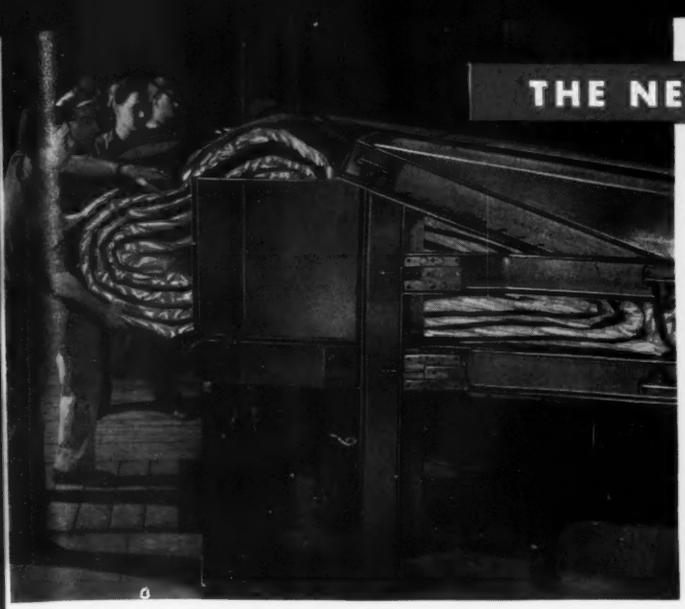
Fiberglas engineers weren't satisfied with this package. Building insulation has to be essentially a low-cost product. And not only were they packaging and shipping 98% air—and paying extra storage, handling and freight costs for this bulk of air—but the hand packaging operation was slow and expensive, it took a lot of valuable factory space to store and open the car-



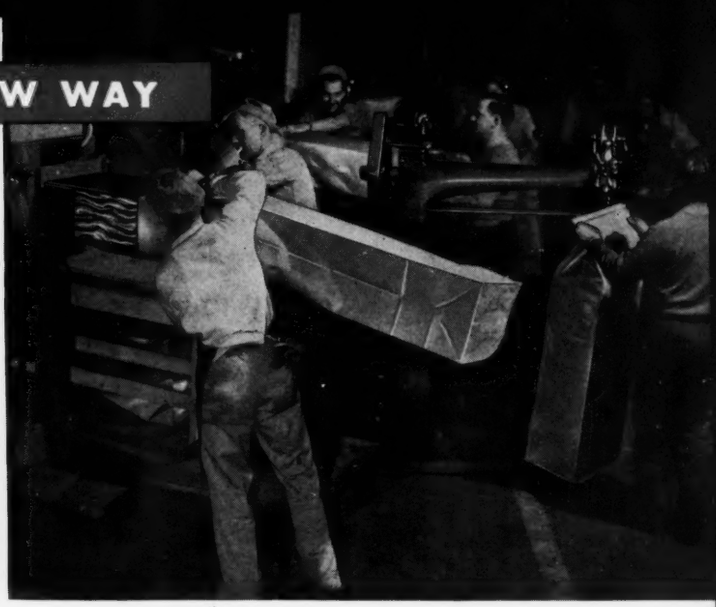
5 Belts are used to carry product into the paper bag.

6. Bag loader is tilted downward; it's now a one-man job.

THE NEW WAY



3. Rolled blankets are inserted in compression machine.



4. Compressed product is forced into bag at other end.

tons, close them and seal them and the containers themselves were relatively expensive for such a low-cost, big-volume product.

Palletized handling was considered, but even at a cost of 50 cents apiece for pallets it was found to be unprofitable in this instance. It still didn't provide maximum utilization of space.

Furthermore, the bulky carton was difficult to handle on a building job. A package 15 in. wide and 11 in. thick, that could be passed through the conventional 14-in. opening between studs and joists set 16 in. on center, would be a considerable convenience.

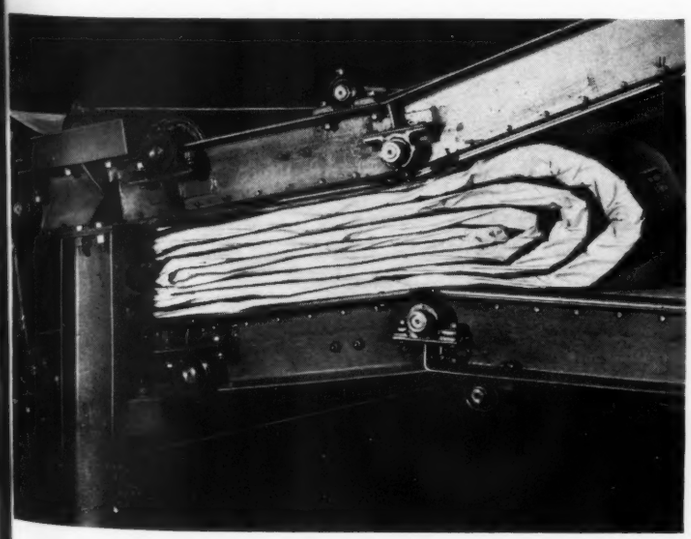
In seeking a better packaging job the obvious objectives were to compress the product as much as possible, thus temporarily expelling a maximum amount of that costly air, and to use a type of package—such as a paper bag or wrapper—which would be cheaper and would still convey the product to the user in as good condition.

The problem was simplified immensely by the fact that the product was one that would stand considerable compression without any impairment. It is one of the peculiar properties of Fiberglas insulating wool that it can be compressed severely for an indefinite period and when released will return to required dimensions. This resiliency is a natural and permanent characteristic of the material.

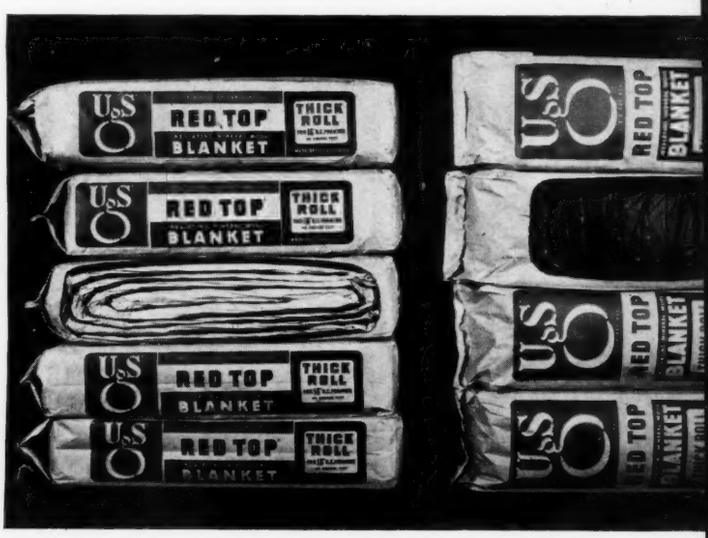
Double-wall, 50-lb. Mullen-test kraft bags were available which proved to have all the strength and protection needed. But there was no machinery in existence which would compress the roll of insulation to the extent desired and place it in a bag in the compressed condition at a speed consistent with the fast-moving production line.

A packaging committee was established to tackle the problem. Could a machine be designed and built to do the job? Could all of the other attendant problems be worked out in the interest of the manufacturer and the customers?

With the cooperation of the Fiberglas laboratories



7. Compression chamber of the final machine in operation.



8. Cutaways here show the rolled insulation in bags.

9. This hand truck could carry only nine of the old cartons.

10. Bulk comparison, old and new packages.

in Newark, Ohio, and of production men at the Fiberglas plant in the same city, the first production machine shown in Figs. 3 and 4, was built in less than three months. It worked.

In order to get rolls of a standard size the insulation material was rolled up on an arbor. The arbor was then removed and the rolls flattened and elongated slightly as they were fed into the wide mouth of the machine. Here the roll was gripped above and below by two separate power-driven canvas belts. Entering the machine proper, the two belts gradually were brought closer together so that, while it was pulled along by the belts, the thickness of the roll was reduced to about one-third of the original dimension. Sides of the machine were open so that the air forced out of the material could easily be expelled.

At the opposite end the compressed roll emerged through a chute just slightly smaller than the inside of the multi-wall bag into which it was to be inserted. These bags, made of two plies of 50-lb. Mullen-test kraft, are 11 by 15 by 48 in. when closed.

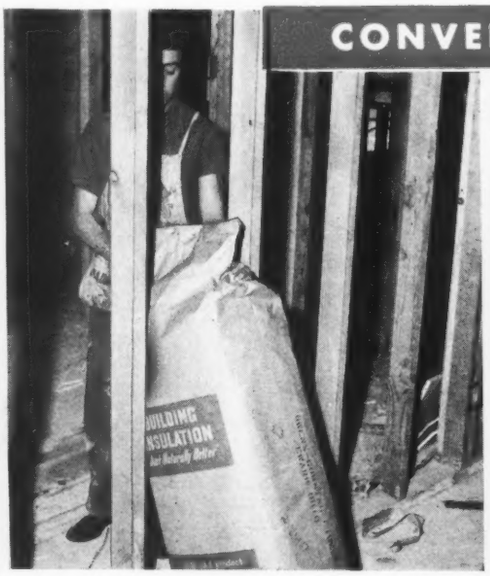
The sheet metal chute through which the rolls emerged was about three feet long. All that was required was for the bag to be opened by hand and then placed over the end of the chute and held by two men while the compressed roll was forced, by the action of the belts and by the next roll pushing behind it, completely out of the chute and into the bag. The bag was then stapled shut on a separate machine and was ready for shipment. The speed of this machine was approximately one bag every 45 seconds.

Although this machine was set up only as a pilot model, it worked so well that hundreds of thousands of pounds of insulation were packaged by it while some improvements were being worked out in later models.

The second production machine was a considerable improvement nevertheless. Over each of the driving belts there was placed a second free-riding canvas belt

CONVENIENCE

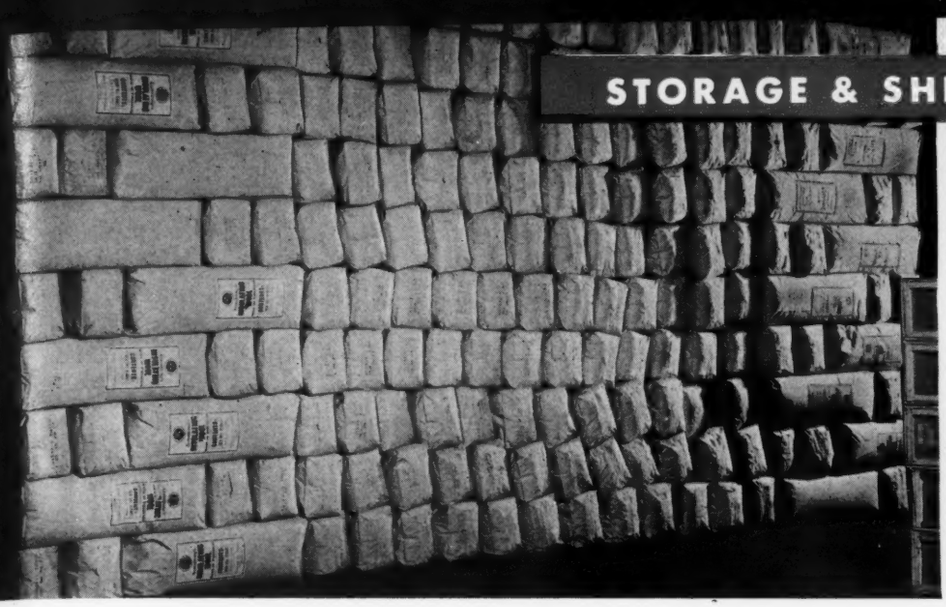
13. Showing cutaway bag sections.



14. Bag passes through 16-in. stud opening.

15. And passes up through the rafters.

STORAGE & SHIPPING



11. Bags now can be stacked as many as 10 high in the warehouse.

12. Bags in a boxcar after shipment.

which actually carried the insulation. The ends of the two carrying belts were brought right into the bag being filled by extending them out on the two arms of the chute, as shown in Fig. 5. This proved to be faster. It also improved the condition of the compressed roll by eliminating the wrinkling caused when one roll pushed another into the chute.

The third model (Figs. 6 and 7) was simply a modification in which the whole discharge end of the machine was tilted downward, ending close to the floor so that it was easier to slide bags on and off. This permitted one man to handle the bagging.

The Fiberglas plant now has several of these machines in operation and more are being built. The filled bags are readily removed from the machine and stapled. The closed bags are loaded on trucks and most of them go directly into freight cars for shipment.

The new package is approximately one-third the size of the old carton.

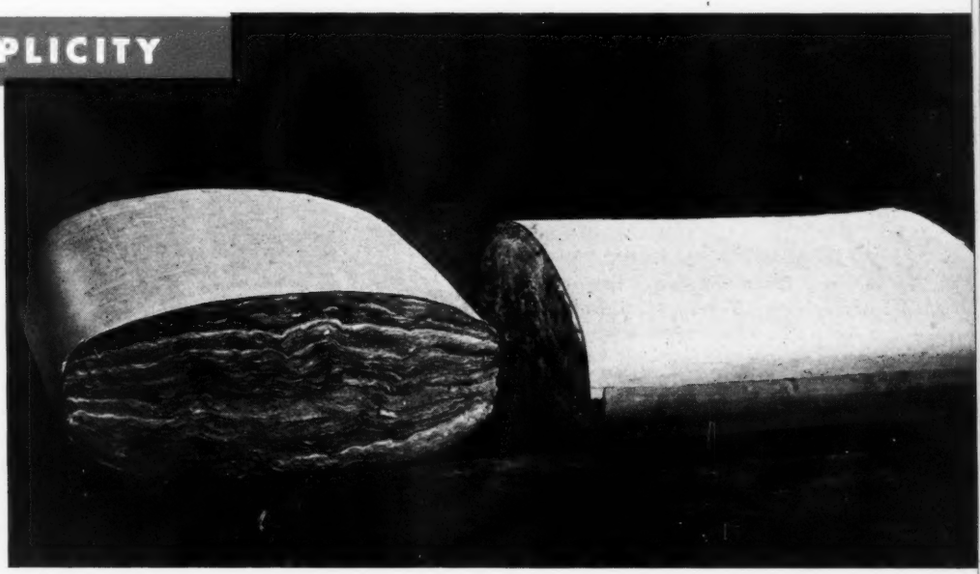
The tightly packaged bag has been found to have ample strength for handling and stacking in warehouses as many as 10 high. The product, of course, is exceptionally light, a complete package of the 1-in.-thick material weighing only 23 lbs. The principal distributors of Fiberglas insulation are Armstrong Cork, Flintkote and the United States Gypsum Co. Most of the bags used are colorfully preprinted with the label and trademark of the distributor to whom the package is to be shipped.

Fiberglas customers have expressed themselves as delighted with the new bag package. One of its principal advantages, illustrated in the pictures herewith, is that it can be readily passed through studs and girders by carpenters on a building job, saving a great deal of time.

CREDITS: *Bags by Chatfield Paper Co., Cincinnati, and St. Regis Paper Co., New York. All machines designed and built by Owens-Corning Fiberglas Corp., Toledo.*

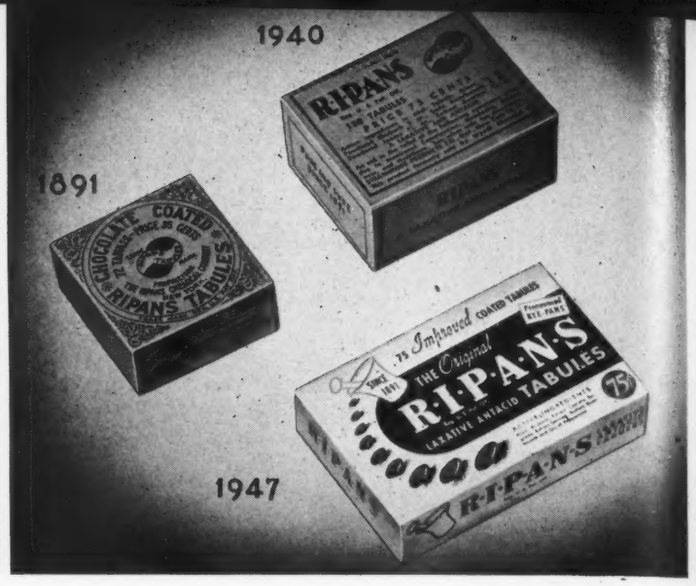
SIMPLICITY

16. Bag takes gummed label.



17. This compressed package for refrigerator insulation is still in experimental stages.

Both inner packaging and outer shipping cartons have been redesigned for the entire line of Westinghouse incandescent and fluorescent lamps. A shift to a horizontal from a vertical package and change of coloring to blue and orange provide a billboard type of carton for more effective display and eye appeal. The inner corrugated sleeve serves as a shock absorber. Container, Hankins Container Co., Cleveland.

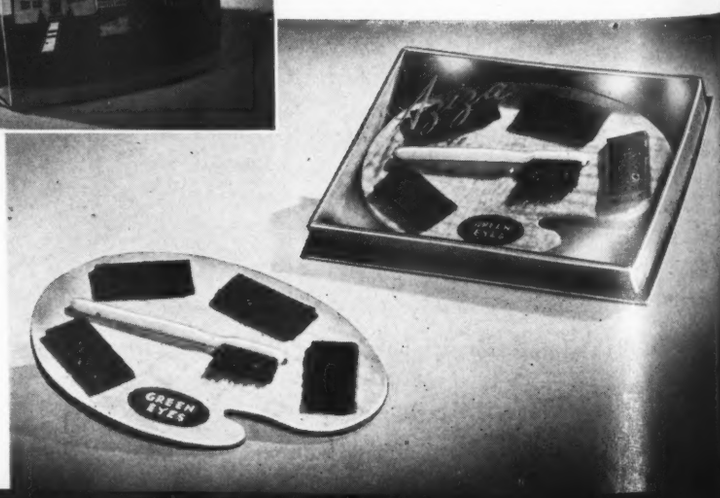


The original Ripans package of 1891, the 1940 version and the 1947 redesign show the rapid pace of current packaging design trends. For over 40 years the original design was adequate. Within seven years the second package was outmoded. Modern typography and bright coloring make an up-to-date box for these laxative antacid tablets. Contract packaging, Production, New York. Carton, Chopp Printing Specialties, Inc., New York.

MODERN PACKAGING

Botticelli's painting, "Venus Rising from the Sea," inspired Woodbury's new Venus design. Matched make-up box for Fiesta cosmetics is first item to use it. Rouge and lipstick rest on paperboard and acetate covers powder. Cover paper, J. Makowsky Corp. Box, F. N. Burt Co., Inc.

Duplex kraft bags printed in three colors are used for the new consumer package of Mixtite, an asphalt powder mix made by Rand-Williams Mfg. Co., Inc. Product is a low-cost, easy-to-use waterproofing material applicable for troweling or painting by addition of any oil solvent. Mixtite also comes in 1-, 5- and 50-lb. bags. Closure is formed by a double fold and stapling. Variations of the product are Mixtite red and Mixtite aluminum paint. Bags, Union Bag & Paper Corp., New York.



Eye make-up by Aziza is applied from a miniature artist's palette, made of laminated paperboard die-cut. Paperboard box has transparent acetate lid. Box and palette, Wm. Buedingen & Son, Rochester, N. Y. Lid, Acetate Box Corp., Brooklyn, using Celanese Plastics Corp. acetate.

LaFrance, General Foods' bluing flakes, is now in a newly designed package 20% larger than the old container. Identical lettering is retained for the trade name, now printed on a simplified upward-slanting white band. The larger box enables the name to appear on one line. An arrow-like patch calls attention to the "new improved" formula. The triangular perforation on the side is for pouring. Design, Frank Gianninoto & Assoc., N. Y.

PACEANT

B. F. Gladding & Co. has selected polystyrene for a new molded plastic spool to carry its Invincible fish line. The spool is white, with gold leaf stamping on one side. An embossed paper label in black, white and gold, giving name, size and test of the fish line is affixed to the other side. Two spools are contained in a gold carton with Gladding name in black. Spool, Westcox Plastics Co., Buffalo. Label, The Foxon Co., Providence, R. I.

McKesson & Robbins' Tawn gift set is made of hardwood plywood laminated to two faces of kraft. Paper cover is printed in herringbone design. Material, U. S. Plywood Corp.'s Tekwood. Converter, A. W. Burritt & Co., Bridgeport, Conn. Boxes, Warner Bros. Co., Bridgeport.

Related cartons package the new series of model planes by Strombeck-Becker Mfg. Co., Moline, Ill. The color panel on the right hand portion differs for each box to enable instant identity of the type of plane enclosed. All boxes carry a reproduction of the plane in flight, together with its name and military designation. Semi-technical blueprint drawings give the boxes a professional air. The large kit is a set-up box while the smaller ones are folding cartons. Containers, Dubuque Container Corp., Dubuque, Iowa.

Revlon's new "Travel Trunk" package is a simple paperboard set-up box designed to resemble a wardrobe trunk. A die-cut tray in one side holds lipstick and nail polish in place. The powder box rests on an inner platform. Price ticket extending from the side resembles a trunk tag. Container, Martin Paper Box Co., Brooklyn.

Heating pads...

One basic photographic design showing an attractive girl using the product has been adopted for all four packages in the line, but printed in a different color on each to distinguish the four different styles.

Casco Products Corp. decided that packages designed to highlight the cosmetic and personal applications of their electric heating pads would greatly aid the dealer in presenting these products to their customers.

One basic photographic design has therefore been chosen for the four basic products of the line. The personal application idea is strikingly dramatized by the illustration of an attractive girl using the product and showing the convenience of the illuminated Nite-Lite switch which is an outstanding feature of this line of products.

The illustration also directs the customer's attention to the transparent cellophane window through which the product can be seen in its washable pastel cover.

The heating pads are made in four different styles which sell at different prices. To aid the retailer, the package for each of these has been made in a different color which identifies the type of pad contained. When combined, the colors are planned for effectiveness in display. The different colors further help the shopper in selecting the pads in accordance with their various qualities and prices. A dark blue has been selected for the 3-speed electric heating pad which has a plain pastel washable cover and two safety controls on each speed. A dark green signifies the Casco 3-Speed Nite-Lite electric heating pad which has a quilted-type cover that shows through the transparent window of the package. A maroon package designates the 3-Fixed Heat Nite-Lite pad which has features that permit the user to select a constant temperature and which has a Paisley-design pad cover.

A black package with full color illustration depicts the deluxe model which is a wetproof heating pad with

packaged as beauty aids

Nite-Lite switch designed to permit the choice of 30 different temperatures and suitable for use with wet dressings. Through the window of this package the shopper can see the quilted satin pad cover.

A fifth package is designed for professional and medical use, while a sixth one houses a smaller electric sinus and muscle pad. Both of these are designed to present the ethical uses for the products. The box cover papers for these are ivory colored and lacquered. The printing is deep blue with gold trim. There is no illustration, the entire package being a straight-forward copy presentation indicating the specialized uses of these electric pads for treatment requiring moist heat. Further directions are given on the inside die-cut covering over the base of these boxes.

Additional sales aids are the "Facts for Buyers" messages printed on the backs of each of the boxes. In a few moments' reading the prospective customer is provided with a complete review of the high points of construction, uses, care and individual characteristics which distinguish each of the products. In addition, the back of the package carries the company's guarantee and a special space for price designation.

Planned with retailers' display problems in mind, the new packages are made in convenient dimensions of 13½ by 15½ inches. A special wooden frame has been provided by the company for a step-up counter display of the five Cascomatic heating pads including the professional pad. Another metal-frame floor model that holds all six packages is proving to be an effective sales device. The stand is made to save space and does not obstruct eye level vision throughout the store, but does permit a full view of each of the packages. Both display units are equipped with poster cards.

CREDITS: *Box designs, Gustav Jensen, New York. Lithography, New England Printing and Lithography Co., Bridgeport, Conn. Boxes, Robertson Paper Box Co., Montville, Conn.; Manufacturers Box Co., Bridgeport, Conn., and Associated Folding Box Co., Boston, Mass. Display, J. J. Einhorn Co., New Haven, Conn.*

Packages are made in convenient dimensions for display on a specially designed metal floor stand that holds six of the packages.

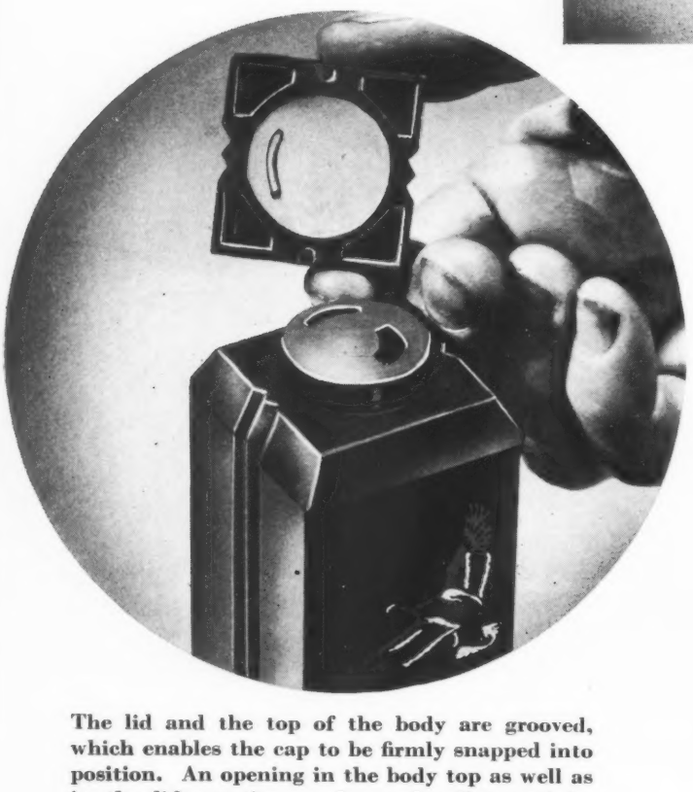
A step-up display has been planned for counter use and holds five of the packages including a place for the professional heating pad package.

Two packages are designed to house products for professional use. An ethical appearance is achieved by the ivory-colored background and simple blue printing with a trim of gold.

NEW "Sportsmen"

John Hudson Moore has a plastic talcum bottle with an integral shaker top and a new line of toiletries for juniors

Sportsman talc is now in a single-unit plastic container molded in three pieces—body, cap and bottom. Pivoting shaker top replaces old screw-on wooden cap, forming an easy-to-use, masculine container. New box is more suitable for molding.



The lid and the top of the body are grooved, which enables the cap to be firmly snapped into position. An opening in the body top as well as in the lid permits powder to be dispensed by simply turning cap to the right. No longer is there a lid to be removed and possibly misplaced.

John Hudson Moore, Inc., has catered to masculine taste in redesigning its plastic container for "Sportsman" talcum powder. While coloring and decoration are substantially the same, construction of the container has been changed to make it smarter in appearance, more convenient to handle and more suitable for molding. The box is now a single smaller unit, with cap attached.

When plastic was first adopted for Sportsman talc (see MODERN PACKAGING, April, 1945, p. 106), the container was designed to duplicate exactly the appearance of the previously used glass one. No attempt was made to develop a package that might take full advantage of the properties offered by the plastic material. Contours were exactly the same as the old, its wooden closure was identical and at first glance it was almost impossible to detect a difference between the old and the new.

Now the plastic talc container for Sportsman has "reached maturity." It has been especially designed

to utilize to the fullest the advantages of the material itself and to provide a convenient-to-use cosmetic holder for men.

The container is molded in three pieces—body, top and bottom—to form a single complete unit. The body and the bottom piece are injection molded of polystyrene and the cap is compression molded of urea. In the course of the design revision, the new containers have been made a little more suitable for molding.

Feature of the newly designed container is the snap-on lid which replaces the previously used screw-on wooden cap. Both the cap and the top of the body are grooved and when the lid is snapped on it remains firmly in place. Openings in the lid and at the top of the body enable the powder to be dispensed simply by a slight twist of the cap. Fortunately, it has been found that the powder acts as a lubricant; with use, the cap turns more easily.

The bottom piece of the container is formed separately because the box is filled through the bottom opening. A solvent (propylene dichloride) is used to secure the bottom piece in place after filling.

While the decorative design on the container has not been changed, the shape of the box itself is different. Instead of the old rectangular shape, the new container is square. The new shape and the attached lid have more masculine appeal, the company feels, since the container can be grasped more firmly in the hand and there is no lid to be removed and possibly misplaced.

Fluted grooves on each side give the new container graceful, modern lines. Coloring of the container body is bright green—somewhat lighter in hue than that used before—and the cap is chocolate brown. The multicolored game bird design, like that on the old box, is silk screened on the front panel.

The new container differs completely in form from other products in the Sportsman line. It harmonizes with the other glass-packaged items, however, and blends in nicely to complete the gift-set packages. The company believes that, as an individual item, the talc will probably increase in volume of sales by reason of the new box.

Sportsman Junior

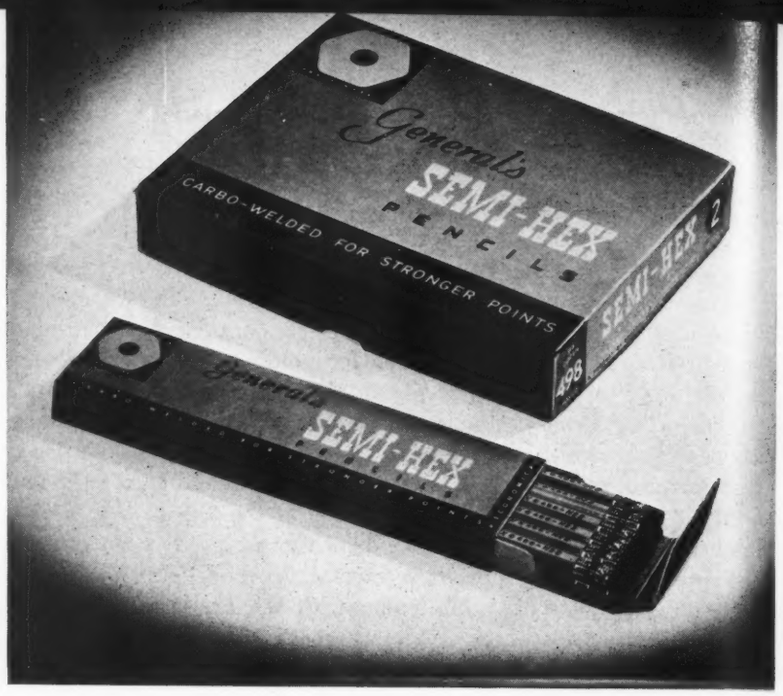
Also recently introduced by John Hudson Moore, Inc., is a completely new line of cosmetics for young men of high school and college ages—Sportsman Junior. Products for the Junior line are identical with those for the regular line; packaging alone has been used to create a market for the Sportsman cosmetics among the younger set.

Decorative theme for the Junior packages is also the sports field. Here, however, sports which schoolagers find more appealing and in which they participate are used—football, baseball, basket ball, skiing. Great care has been taken to assure authenticity of each design. Stance of the batter in the baseball illustration, for example, is the correct one for good hitting. The skiing illustration catches the skier in a perfect jumping position; snow-streaked mountains as the background scene for the skier add to the naturalness of the setting.

Glass bottles with wooden caps identical with those for the regular line package Sportsman, Jr., liquid products—shaving lotion, cologne and hair dressing. Plastic-capped collapsible metal tubes are used for the shaving cream, while the talc is packaged in a fibre can with a dispensing top of metal. Items are packaged individually in paperboard set-up boxes. Five different sets holding various combinations of the products and smaller sets hold two and three items. Sets are packaged in set-up paperboard boxes fitted with die-cut trays for holding the individual containers securely in the boxes.

CREDITS: *Plastic talc container molded by Prolon Plastics, division of Pro-phy-lac-tic Brush Co., Florence, Mass. Silk screening, Creative Printmakers, Inc., New York. Design for Sportsman, Jr., packages, Alec Kenne, Poughquag, N. Y. Boxes, Imperial Paper Box Corp., Brooklyn, N. Y. Wood closures, Gibson-Jones Co., Inc., New York. Glass bottles, Swindell Bros., Baltimore, Md.*

New line for young men has been named Sportsman Junior. Decorative theme of line is also the sports field, but those sports more appealing to younger set—skiing, baseball, basket ball, etc.



The new box for the popular Semi-Hex pencil is clean, strong and modern in design with a simple trademark well displayed in the upper left-hand corner.

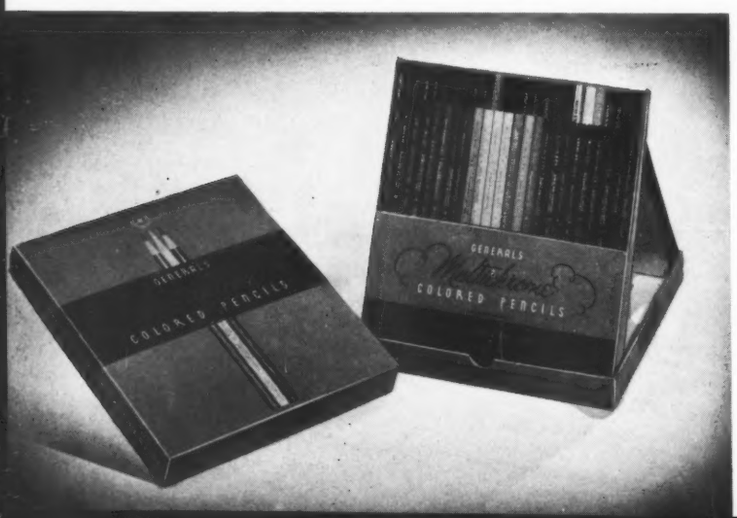
PENCIL PACKAGES

Two new General Pencil Co. boxes make a clean break with established design and offer the dealer a plus in display value and in convenience for the user

Virtually a trademark for the General Pencil Co.'s famous Semi-Hex pencil for years was the vignette of ox-drawn covered wagons crossing the Western Plains which appeared prominently on both the dozen folding box and the set-up box for six dozen. The original idea was to represent the pioneeering instinct of the founders of the business—who were among the first to manufacture lead pencils in this country—and also to support the slogan "Used by millions from coast to coast," under which the Semi-Hex pencils were merchandised. These boxes were colorful, dignified and attractive, but they were definitely "old hat."

When an established package like this is modernized, an attempt usually is made to retain some of the spirit and atmosphere of the old design for its recognition value. Not so in this case, however. The new package boldly ignored the old and developed into such an attractive and impressive package that General Pencil officials felt they could safely tear away from tradition.

Box for assorted colored pencil sets up as display for dealer and as functional holder for user.



The background of the new Semi-Hex box is gray, trimmed with a teal blue panel at the bottom. The lettering is in blue, white and black, with the name "Semi-Hex" standing out very boldly in white. The large Semi-Hex trademark on the black square at the upper left corner is in a bright yellow.

At the same time General Pencil is introducing a new thick-lead colored drawing pencil, called "Multichrome," in a box which is interesting for its construction as well as design. This pencil is produced in 50 colors and the box illustrated here contains a rainbow selection of 48 colors. Although it has the appearance and strength of a set-up telescope box, it is actually one piece, a stapled flap connecting the base and lid so that the box may be set up in easel style for counter display. The construction is simple and it is impossible to open the box without grasping the idea of an easel set-up. This is as handy for use as it is for display.

The Multichrome pencils are packaged in sets of 12, 24, 36 and 48 assorted colors, and also three dozen of one color to a box.

CREDITS: *Semi-Hex box designed by Egmont Arens, New York; manufactured by The Lord Baltimore Press, Baltimore, Md. Multichrome box designed by Frederick Smith, New York; manufactured by Shoup-Owens, Inc., Hoboken, N. J.*

Plastic container is two-piece construction with black base and transparent lid which swings on metal hinge. Removable tape protects finish. Counter dispenser has five compartments for blades two for company's own make, three for others. Acetate hood covers the display.

Polystyrene razor box

Protective re-use case adopted by Durham-Dorset offers utility and visibility, and is so designed that it will hold no other razor

The molded plastic container continues to gain wide favor for the packaging of razors because of its adaptability for permanent re-use by the consumer and interesting display features. In recent months several large razor companies have adopted plastic containers of interesting new design. Among the newest is the plastic package for Durham-Dorset razors, made by Durham-Enders Corp., planned for visibility and utility.

The plastic box is of two-piece construction with a black base and transparent lid, equipped with metal-pin hinge which allows the top to open on a swinging principle.

Polystyrene was selected as the material for both base and lid because of its present availability. Both are made in two-cavity molds. Guards recessed in the base are designed to fit only Durham-Dorset razors and blades so that the boxes cannot be used for razors of any other makes.

The lid fits over the base tightly so that the container, when snapped shut, is comparatively well-protected from water—an advantage when the razor is stored on the bathroom shelf.

To protect the finish of the transparent lid in shipment, the company affixes a removable piece of pressure-sensitive tape. This protective labeling is simply printed with a rubber stamp and tells the reason for its usage with the direction to the storekeeper to remove before displaying.

The plastic cases are each wrapped in white tissue paper secured with a gummed seal. This wrapping was selected in preference to a chipboard box, because the company wishes to encourage the dealer to display the razor in its transparent box and believes he is more likely to remove the tissue than a carton to put the containers on the counter.

A new counter dispenser for blades has been designed as a promotional piece for the Durham-Dorset razors. The unit is made of laminated black board with die-cut letters across the top. Die-cut letters of foil, pasted to the unit, give a brilliant contrast to point up the trade name in silver. A beaded acetate hood covers a tamperproof display of the actual razor and package of blades.

The back of the unit has five compartments, two of which hold the company's own blades and the other three are for blades of other makes. Slots at the base allow for the dispensing of one carton of blades at a time. This provision for the stocking of competitors' blades gives the dealer a more versatile unit that he is likely to display for a much longer period of time.

CREDIT: *Package and display, J. J. Einhorn Co., New Haven, Conn.*

MP Display

Metal is used for Richfield's new counter display piece. Compact in size, it can accommodate as many as 14 different products for home and car use. Three shelves are built into the display and they are so designed that cans, bottles and cartons of various sizes and shapes may be placed on them. Lower shelf is rounded at the center to enable the squat, round container for auto wax to fit in position. Display, Arvey Corp., Chicago.

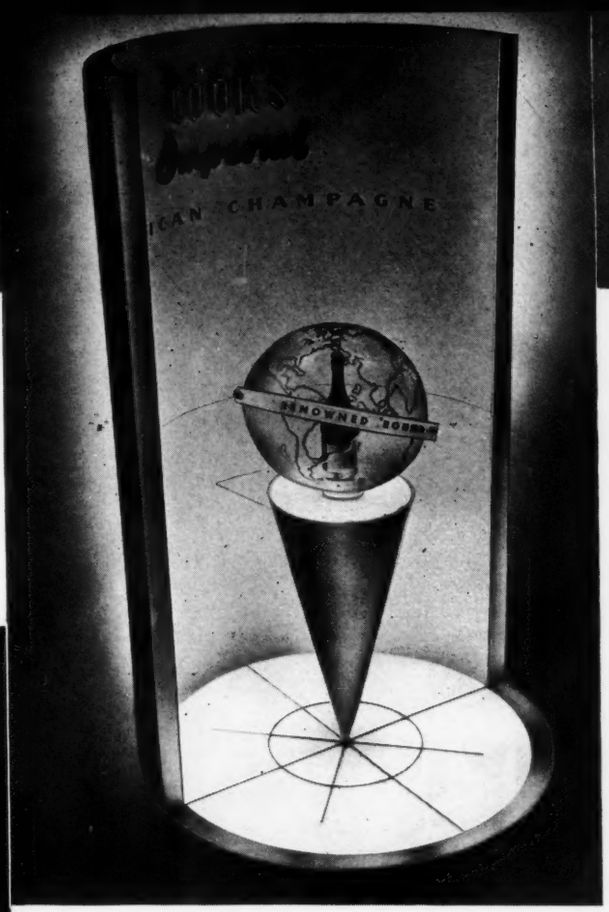
The new popular-priced line of Tattoo cosmetics is being promoted with these self-selling display pieces. Die-cut paperboard cards are used for rouge and lipstick. Attached pocket on lipstick display holds purse cosmetic cases. A color card aids the buyer in matching lipstick and rouge. Center wooden display is for "Color-Mates," matched colors of lipstick and nail enamel. Paperboard displays, Alco Printing & Paper Box Co., Chicago. Wooden display, Milton Sturm & Co. and Paull Mfg. Co., Chicago.

Realistically demonstrating the use of Kem-Tone is this lithographed paperboard display. Life-sized figure is that of a Conover model on a ladder, roller in hand and ready to paint. Sell copy appears both at top and bottom of display. Below are listed six points about the product, while name and price are given above. Display, Einson-Freeman Co., New York.

Dealer convenience is provided by this display cabinet holding refill blades for X-acto knives. Measuring 10 by 7 by 6 in., it occupies only a small space on the counter or shelf. The cabinet is made of blonde wood. Its acrylic hood permits visibility of the product and prevents pilferage. Packaged blades are fitted into individual compartments. Plastic material, Plexiglas, Rohm & Haas Co., Philadelphia.

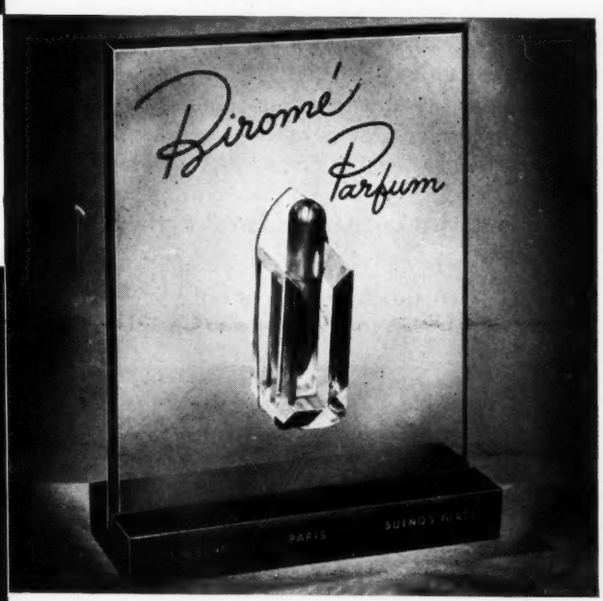
Gallery

Light and plastic combine to form this motion display for Cook's Imperial American champagne. Sphere, air-brushed to represent the world, contains bottle and revolves on pedestal lighted from within. Lights beneath base illuminate 8-ft. semi-circular back. Color scheme is Cook's traditional gold and dubonnet. Display, Olson Designers, Chicago. Material, Rohm & Haas.



High visibility features this display case for Wearever fountain pens. Case is of walnut with three glass sides. Two-level tray holds 36 pens and is designed so that tray does not have to be taken completely out of case for removal of individual pens for customers. Display, Copeland Displays, Inc., New York.

Opening in center of this acrylic display stand serves to hold a clip of same plastic. Clip, highly polished and with beveled edges, acts as a spring to hold vial of Birome Perfum. Name is hot stamped on display. Display, Blue River Plastics Mfg. Corp., New York. Material, Du Pont Lucite.



View of product from all sides is enabled by acrylic dome for RCA miniature radio. Dome is drawn in one piece, fits into base covered with glass fabric. Wreath over dome is finished in gold. Display, W. L. Stensgaard & Associates, Chicago. Material, Rohm & Haas.

FIRST PRIZE: Excellence in protective packaging; good trademark identity and family tie-up; informative labels.

PRIZE WINNERS

Farm co-ops select best of their 1946 packages; good functional qualities, informative labeling are evident in competition at annual convention

A packaging competition played an important part in the recent "Information Service Fair," a first-time feature of the eighteenth convention of the National Council of Farmer Cooperatives in Chicago.

Keenly aware of the shifting trends in merchandising, the Council is placing considerable emphasis on all promotional materials which—for purposes of the Information Service Fair competitions—were classified into 15 groups including, in addition to packaging, such classifications as membership, magazines and newspapers, house organs, news releases, service bulletins and institutional as well as commodity and service advertising.

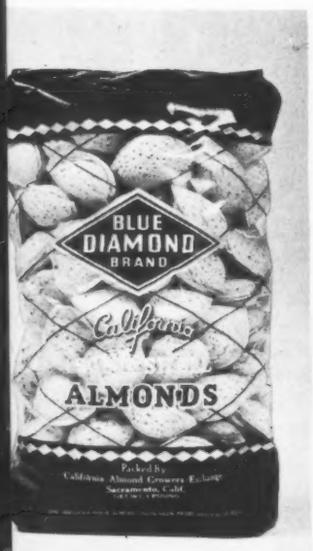
First award in the packaging group went to the Eastern States Farmers Exchange, West Springfield, Mass., for its entry of 11 diversified products in the field of lubricants, cement, protective coatings, paints and insecticides. This line was awarded first place because it exemplified excellence in protective packaging. Although many different packaging materials are used—metal cans, fibre cans, bags, cartons and boxes—the identity of the distributor was clearly shown and the entire line was unified by the use of a sunburst trademark on every package.

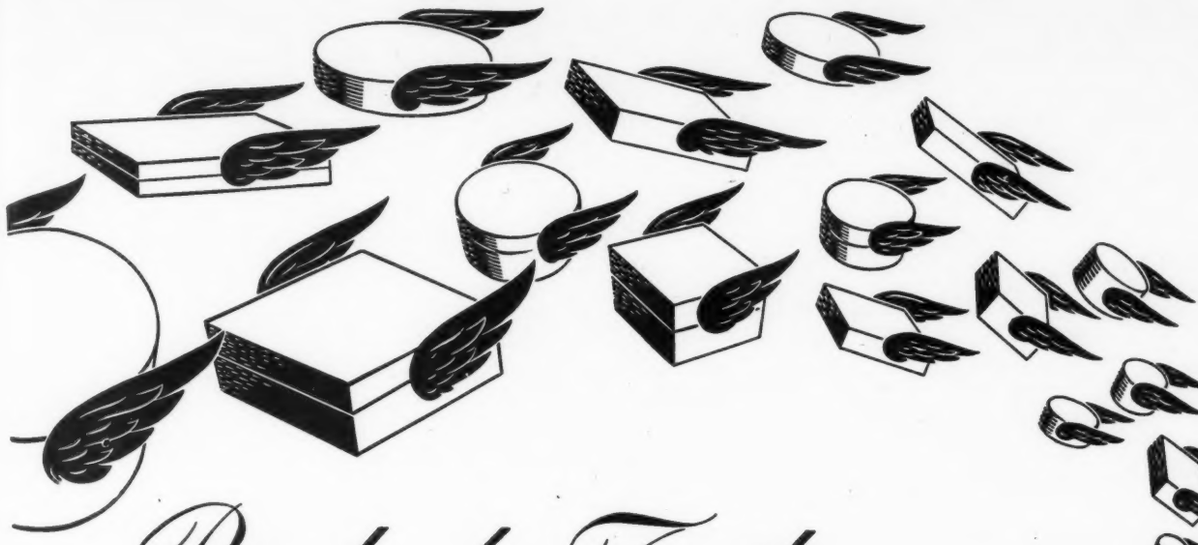
Second award went to the California Almond Growers' Exchange, Sacramento, Calif., because of the following factors: (1) Intelligent use of printed cellophane for visibility of contents and at the same time exhibiting the "Blue Diamond" trademark to good advantage. (2) Adaptation to self-service selling. (3) Modern design.

Third place went to the Indiana Farm Bureau Cooperative, Indianapolis, Ind., for its entry of a multiwall paper bag containing "Co-Op Dust No. 3," selected because it presents full information about the product, its purpose, its ingredients and directions for use.

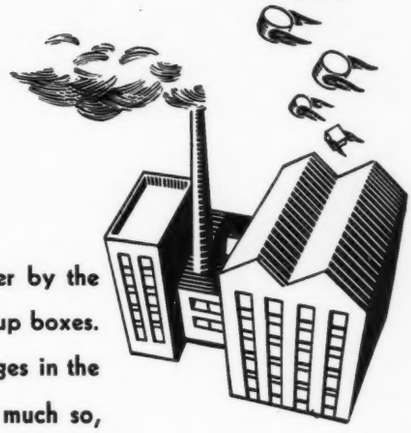
The competition in all groups was open to direct and indirect members of the National Council of Farmer Cooperatives, but was restricted to materials produced for release in 1946. In the packaging group entries were made by means of photographs. Prescribed as standards for judging all groups were such factors as functional qualities, graphic merit, interest quality and technical merit. Entries in the packaging group were judged by the Editor-in-Chief of MODERN PACKAGING.

SECOND PRIZE (left): Intelligent use of cellophane bag. THIRD PRIZE (right): Full information and instructions.





Birds of a Feather FLOCK TOGETHER



At the plant of F. N. Burt birds of a feather flock together by the millions, in the shape of round, square, oval and oblong set-up boxes. No matter what the shape, size or color, we produce packages in the millions and tens of millions all looking exactly alike. So much so, that you can't tell the ten millionth from the first. We don't use black magic; we simply turn them out automatically with our special machines, designed and built by us.

Count on *automatic* production to give you uniform packages, all to your exact specifications. They'll be indistinguishable from each other; distinctive by themselves.

You'll get them fast, too.

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New York City • Philadelphia • Boston • St. Louis • Atlanta • Chicago • Cleveland
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CANADIAN DIVISION:
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America's leading manufacturers consistently choose "PACKAGE" machines

For more than thirty years manufacturers in many fields have come to rely on "Package" for dependable, thoroughly modern wrapping equipment. The fact that a large percentage of our current business is repeat orders from old customers proves this. Today over 80% of America's entire output of machine-wrapped goods are handled by our machines.

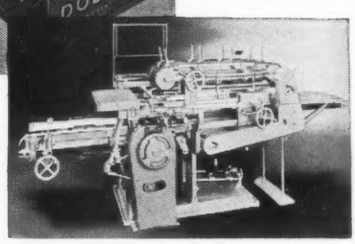
New Developments

Our engineers have recently developed new machines capable of wrapping numerous items which heretofore could not be given the sales advantage of smart, eye-catching wraps. Moreover, they are constantly improving our standard models—incorporating new features that improve mechanical operation.

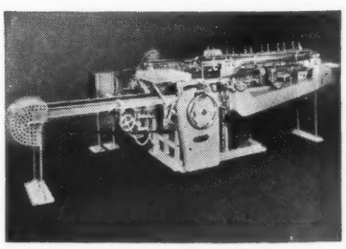
Our new, vastly improved Model FA is a typical example of this program of continual modernization. This popular model has been made faster . . . More readily adaptable to various types of products and styles of wrapping . . . More economical to operate . . . More easily adjustable for various sizes . . . More compact . . . Quieter . . . And generally more efficient. It wraps with virtually any plain or printed material. Only one operator is required for supervision and to make the simple adjustments necessary to change over from one package size to another.

Let Us Help You

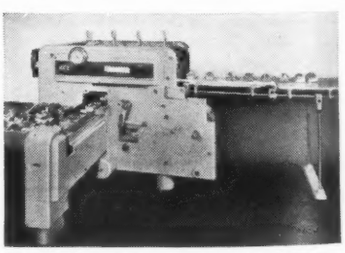
If you have a new product to wrap, if you plan to stimulate sales by restyling your current package, or if you are interested in cutting costs by increasing the over-all efficiency of your present packaging set-up — consult our nearest office. We'll be glad to supply you with complete information and literature on any of our machines, or if you prefer, to discuss your packaging problems with you in person.



The extremely versatile FA—most widely used of all wrapping machines.



The FA-2T—recently developed for wrapping textile products, paper goods, etc.



The Universal 4—a machine that is blazing a new trail in wrapping vegetables and fruit.

PACKAGE MACHINERY COMPANY, Springfield 7, Massachusetts
30 Church St., New York 7 • 111 W. Washington St., Chicago 2
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PACKAGE MACHINERY COMPANY

Over a Quarter Billion Packages per day are wrapped on our Machines

MOISTURE EQUILIBRIUM

Sorption isotherms offer graphic method of finding relationship between moisture level and equilibrium relative humidity

by WILLMER A. FUNK*

The facts concerning the humidity equilibrium characteristics of a product are essential to determination of the proper package. This article describes a practical and convenient method of determining humidity equilibrium characteristics of many materials and it should be particularly useful for laboratories interested in rapidly evaluating a large number of products to be packaged.

Information on the relationship between the moisture content and the equilibrium relative humidity for such materials as pulp, paper and foodstuffs is frequently of considerable importance. This relationship for a given material, presented graphically, is referred to as a moisture equilibrium curve or a sorption isotherm. The latter term is preferred because it emphasizes the fact that a particular curve represents the relationship of the moisture content to the equilibrium relative humidity for a specified temperature. For many materials the moisture content depends upon the temperature as well as the relative humidity to which they are exposed. At any particular relative humidity the moisture content of such materials decreases as the temperature is raised and, conversely, increases when the temperature is lowered.

Another point of interest is the phenomenon of hysteresis. In numerous materials the moisture content at a particular relative humidity is smaller when that condition is approached from a lower relative humidity than it is when approached from a higher relative humidity. The absorption and desorption isotherms are of equal interest and importance in many cases.

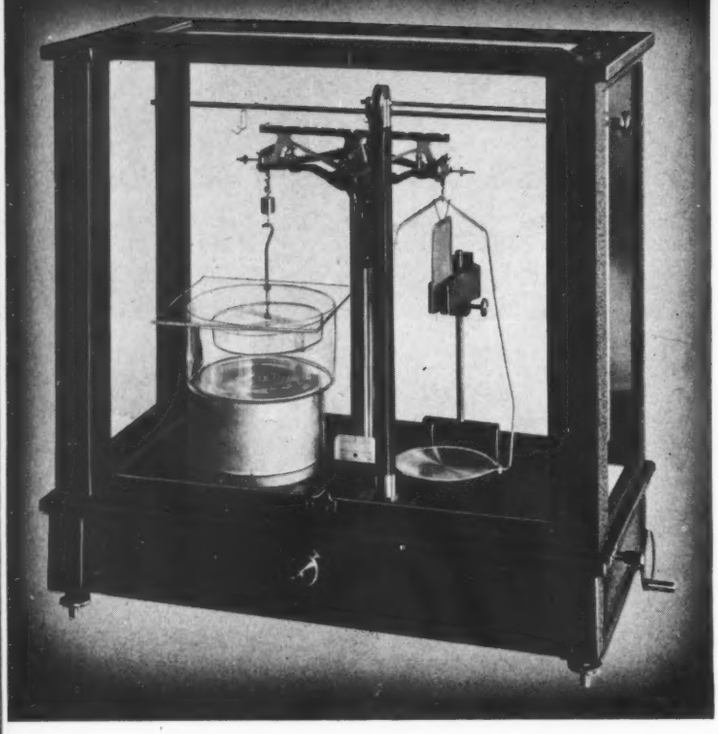
During the war the extensive use of paper products in the packaging of foods for the armed services and civilians aroused an increased interest in the relationship of moisture content to equilibrium relative humidity and in simple equipment and procedures for obtaining such data. In anticipation of such work at the Institute, a new procedure for obtaining sorption data was developed. The general principle of this method was originally described by Gane (1)† and more recently in greater detail by Wink (2). This method requires a minimum of uncommon apparatus, conditioning equipment and technique. Specimens of adequate size may be used and data for complete absorption and desorption isotherms may be obtained quickly and simply.

Apparatus

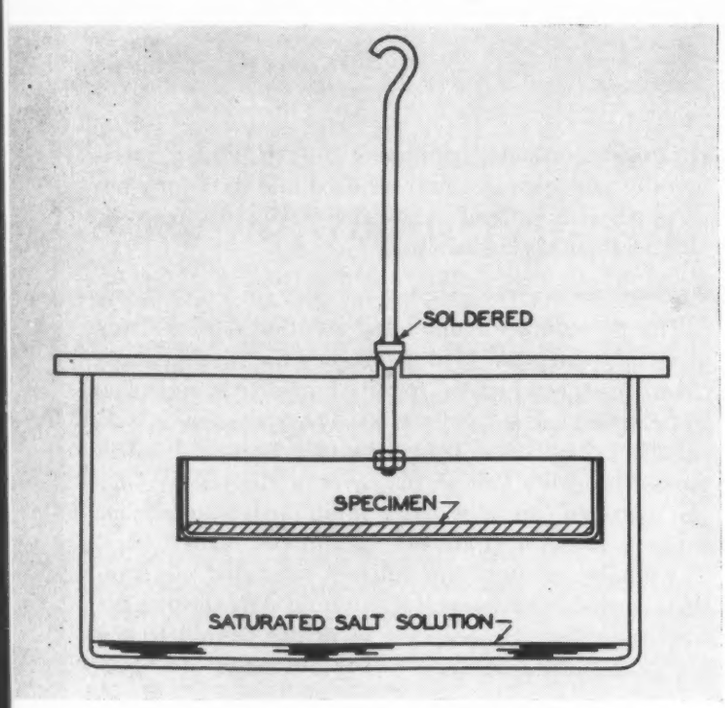
The procedure for obtaining sorption data for any given material consists in suspending the specimen in a closed vessel in which the relative humidity is controlled by a saturated salt solution. The specimen is suspended in the vessel by means of a brass rod which passes through a hole in the cover of the vessel; thus the specimen can be weighed in an analytical balance without removal from the conditioned atmosphere. The number of units and different saturated salt solutions needed in a given test is determined by the number of points desired to define the moisture equilibrium curve. The test is conducted in a room or cabinet of controlled temperature in which no control of the humidity is required.

A photograph of a glass test unit in weighing position in a balance is shown in Fig. 1. The left pan of the balance has been removed and a slotted can has been inverted over the pan ar-

* The Institute of Paper Chemistry, Appleton, Wisc.
† Figures in parentheses refer to "Literature Cited" at end of article.



1. Glass test unit set up in weighing position.



2. A schematic diagram of the glass test unit.

rest to act as a platform for the unit and to facilitate the weighing operation. The hook at the end of the brass rod is engaged in the eye of the counterpoise weight.

A schematic diagram of the glass test unit in normal storage position is presented in Fig. 2. The specimen is normally held in a 93- by 18-mm. Petri dish and is uniformly distributed over the bottom of the dish. This dish is supported by a bracket made from 0.025-in. aluminum sheet. The bracket is $3^1/_4$ in. long and $^1/_2$ in. wide; it is bent to fit the dish snugly. This bracket is fastened to the threaded end of a 0.092-in. diameter brass rod by means of two 2-56 brass nuts. The top end of the rod is bent into a flat hook for convenient suspension from the pan hook of a balance or from the counterpoise used with a magnetic damping device, as shown in Fig. 1. The over-all length of the rod is $3^1/_4$ in. This length is arbitrary and depends upon the depth of the test unit and the height of the platform upon which the unit rests when in the balance. A brass cone is drilled, slipped on the rod and soldered in place with the small end down and at a distance of 1 in. from the bottom end of the rod. This cone is cut from a $^1/_4$-in. brass rod and has a half-angle of about 30 deg.

The top of the test unit is a $5^1/_2$-in. square of double-strength window glass. A $^3/_{16}$-in. hole is cut $^1/_4$ in. off center on a line perpendicular to one edge of the plate and passing through its center. This off-center position is necessary because of space limitations in a typical analytical balance. In particular cases it may be necessary to position this hole further from the center of the plate. The brass cone is normally seated in the hole of the glass plate to seal the hole against passage of water vapor and to support the suspended system. The top edge of the hole on which the cone rests should be free from serious flaws; the edge should be ground lightly with carborundum, using a brass cone of the type just described. No sealing grease is employed in the zone of contact between the brass cone and the hole in the glass cover. The slight leak of water vapor through the zone has a negligible effect on the relative humidity in the vessel.

The main body of the test unit is a 125- by 65-mm. crystallizing dish. The top edge of the dish is ground on a flat surface (e.g., plate glass) with carborundum to remove irregularities. The ground edge is lightly greased with Celvacene (Distillation Products, Inc.). This film of grease effects a good seal between the ground edge of the crystallizing dish and the glass plate when the unit is subsequently assembled.

Approximately 40 cc. of a saturated salt solution having the desired equilibrium relative humidity are poured into the bottom of the crystallizing dish. An excess of the salt is transferred to the dish to insure a saturated condition of the solution while the test is carried out. In obtaining data for a desorption isotherm where moisture is removed from the specimen and transferred to the saturated solution, it is advisable to have mounds of the excess salt exposed above the level of the solution.

The glass test unit permits visual inspection of the specimen during the test; this is a convenience in testing foods and other materials for which the caking point or other critical behavior is of interest.

Table I lists the equilibrium relative humidities for a number of saturated salt solutions at three temperatures—namely, 73 deg., 86 deg. and 100 deg. F. (3).

With few exceptions the general procedure for obtaining sorption data on various materials will be the same; only slight modifications will have to be made to apply to specific cases. The number of test units required for a particular test are temporarily assembled to obtain their tare. An empty Petri dish is placed in

TABLE I—EQUILIBRIUM RELATIVE HUMIDITIES FOR SATURATED SALT SOLUTIONS

Chemical	*Formula*	*Relative Humidity, %* 73° F.	86° F.	100° F.
Ammonium monophosphate	$NH_4H_2PO_4$	92.9	92.0	91.1
Potassium chromate	K_2CrO_4	86.5	86.3	85.6
Ammonium sulfate	$(NH_4)_2SO_4$	80.1	79.6	79.1
Sodium chloride	NaCl	75.5	75.2	75.1
Sodium acetate	$NaC_2H_3O_2$	74.8	71.4	67.7
Sodium nitrite	$NaNO_2$	64.8	63.3	61.8
Sodium bromide	NaBr	58.5	56.3	53.7
Sodium dichromate	$Na_2Cr_2O_7$	54.1	52.0	50.0
Magnesium nitrate	$Mg(NO_3)_2$	53.5	51.4	49.0
Potassium nitrite	KNO_2	48.6	47.2	45.9
Calcium nitrate	$Ca(NO_3)_2$	51.8	46.6	38.9
Potassium thiocyanate	KCNS	46.6	43.7	41.1
Potassium carbonate	K_2CO_3	43.9	43.5	43.4
Chromium trioxide	CrO_3	39.2	40.0	40.2
Magnesium chloride	$MgCl_2$	32.9	32.4	31.9
Potassium acetate	$KC_2H_3O_2$	22.9	22.0	20.4
Lithium chloride	LiCl	11.1	11.2	11.1

the bracket of the suspending device and the glass-plate cover is placed on a crystallizing dish. The left-hand pan is removed from the balance and the platform is placed in position straddling the pan arrest. A counterpoise of sufficient weight to slightly more than counterbalance the weight of the right-hand pan is engaged in the pan hook of the left arm of the balance. With this arrangement the effective weight of the counterpoise is determined by adding weight to the right-hand pan in the normal manner. Throughout a given series of tests the balance is zeroed by adding this weight to the right-hand pan and making the usual zero adjustments. The care exercised in handling a set of analytical weights should be accorded the counterpoise, since the internal consistency of the subsequent weighing operations depends partly on constancy of the counterpoise weight.

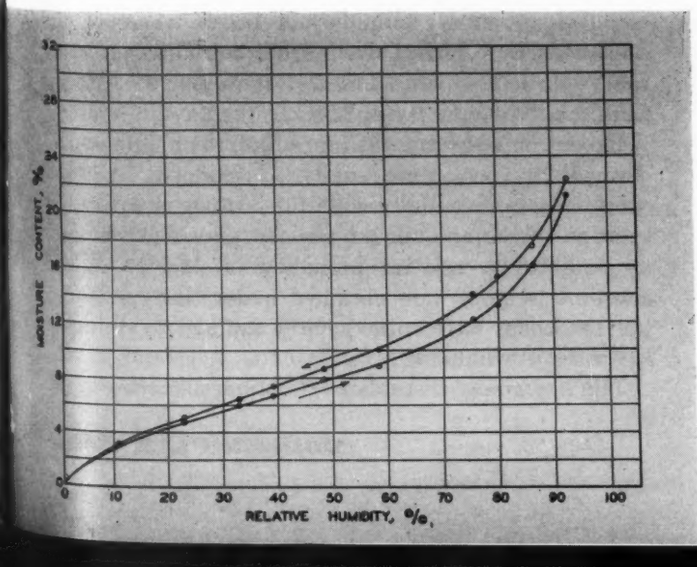
The temporarily assembled unit is placed on the platform and the hooked rod is lifted and gently engaged with the eye of the counterpoise weight. The unit is then adjusted in position on the platform until the rod hangs freely through the hole in the glass plate. The combined weight of the suspending device and the empty Petri dish is then determined and recorded. The rod is unhooked and the unit is removed from the balance.

To insert the specimen and start the test, the cover of the unit is removed, the Petri dish is taken from the bracket and a specimen is evenly distributed over the bottom of the dish. The Petri dish is returned to its bracket, a film of grease is applied to the ground edge of the crystallizing dish and the saturated salt solution giving the desired relative humidity is poured in the bottom of the crystallizing dish. The cover is replaced on the crystallizing dish and pressed lightly into continuous contact with the greased ground edge. The unit is then placed on a storage shelf until time for weighing. The specimens in the test units are weighed in the manner described at approximately 24-hour intervals until the weights become constant.

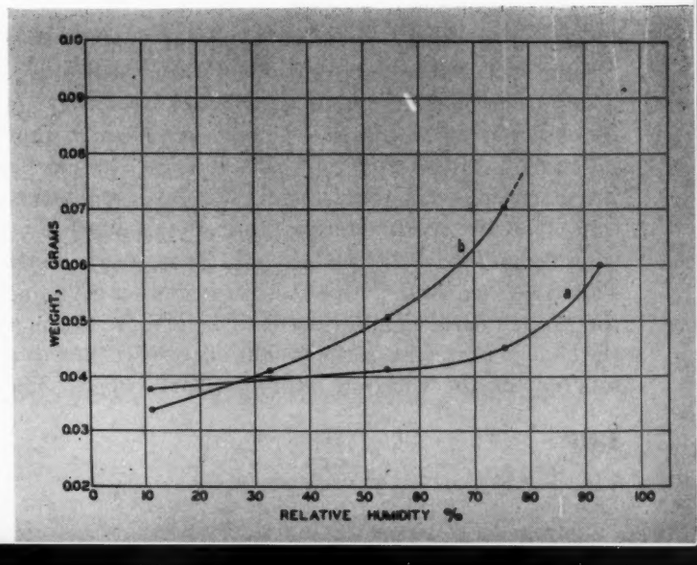
The number of specimens and their initial conditioning vary with the purpose of the test. If a complete absorption isotherm is contemplated it is necessary to dry the specimens before assembling the test units to a moisture content lower than that corresponding to the first point desired on the curve. The number of specimens depends on the number of points considered desirable in defining the isotherm and the number of specimens used to determine each point. For many purposes six to 10 points are sufficient. A corresponding number of saturated salt solutions having equilibrium relative humidities appropriately distributed through the range from 10 or 15% to somewhat over 90% are needed. If a desorption isotherm is wanted the specimens must be wet or conditioned at a high relative humidity before starting the tests. On occasion complete isotherms are not needed; the purpose is served by determining the moisture contents at two or three different relative humidities.

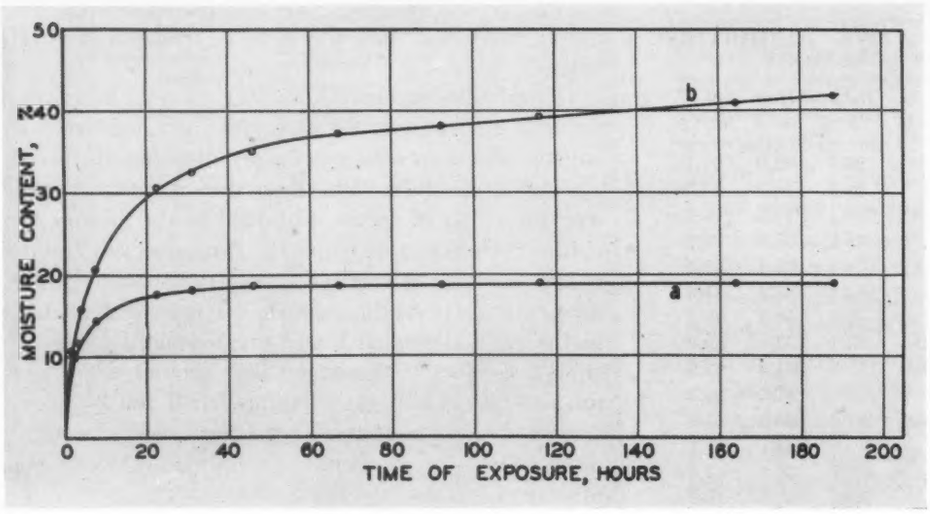
The determination of the moisture content of the specimens may be handled in a number of different ways. For specimens of pulp, paper or other materials which are normally dried in an oven to obtain their moisture content, the specimens are transferred to weighing bottles after the sorption data are obtained. The dry weight is obtained by oven drying. Such materials are easily transferred and the atmospheric

3. The absorption and desorption isotherms for a sample of fiberboard are shown below.



4. The absorption isotherms for both untreated and treated resin films: *a*, untreated; *b*, treated.





5. Relationship of moisture content to time of exposure at constant relative humidity (0–92% R. H.); *a*, untreated; *b*, treated fibre.

conditions to which the specimens are exposed during the transfer does not matter. Since the Petri dish and the weighing bottle are tared prior to the test, the weight of the specimen is known for all the conditions and it is possible to calculate the moisture content of a specimen corresponding to any relative humidity included in the sorption isotherm. It is important to state, however, whether the calculated moisture content is based on data obtained on the absorption or desorption cycle of the isotherm.

For a material which is difficult to transfer and has a tendency to adhere to the glass, a shallow weighing bottle can be substituted for the Petri dish. If the specimen is to be oven dried the weighing bottle with its cover can be placed in the oven. If the moisture content of the material is obtained in any other way the weighing bottle can be covered when removed from the conditioned atmosphere and used as a means of transferring the material to other apparatus.

In obtaining sorption data it must be realized that for numerous materials the time required to obtain a constant weight (following a change in the relative humidity) frequently involves many hours and in some cases may require even weeks. Personnel inexperienced in sorption phenomena are inclined to allow insufficient time between weighings and the true equilibrium moisture contents are not obtained. When a specimen in equilibrium with a specific relative humidity is subjected to a change in relative humidity, the largest change in the weight of the specimen is observed during the first few hours or days following this change. The initial change in the weight of the specimen may be observed by weighing the specimen at short time intervals. As the time interval following exposure to the new relative humidity continues and the moisture content of the specimen asymptotically approaches an equilibrium value, the time interval between weighings should be increased. An effective way of ascertaining the time interval to allow between weighings is to plot the change in weight or the weight of the specimen as a function of the time on semi-log chart paper. The weight should be plotted on the linear scale and the elapsed time on the logarithmic scale. The weighings should be continued until the curve is parallel with the time axis.

Application and discussion of method

For illustrative purposes a few charts are included in the following discussion which serve to indicate the manner in which the method may be employed to obtain various sorption data. An absorption and desorption isotherm for a sample of fibreboard obtained at a temperature of 73 deg. F. is shown in Fig. 3. Since sufficient sample was available, all the points defining the curves were obtained simultaneously. Triplicate specimens were tested at each relative humidity. To obtain the absorption data 30 of the specimens (weighing approximately two grams each) were initially suspended in crystallizing dishes containing phosphorus pentoxide (P_2O_5). Following equilibration to the dry condition, preparations were made for exposing the specimens to various higher relative humidities. Accordingly, an appropriate number of crystallizing dishes was selected, the edges were coated with a film of Celvacene and approximately 40 cc. of a saturated salt solution having the desired relative humidity were poured in the bottom of each dish. In transferring the specimens from the dry condition, three of the specimens were placed over crystallizing dishes containing a saturated solution of lithium chloride having an equilibrium relative humidity of 11.1%, three of the specimens were placed over dishes containing a saturated solution of potassium acetate having an equilibrium relative humidity of 22.9%, etc.

Except for reversing the procedure, the points on the desorption curve were similarly obtained. All the specimens were initially conditioned over a saturated solution of ammonium dihydrogen phosphate having an equilibrium relative humidity of 92.9%. When constant weights were obtained under this condition, the specimens were subsequently exposed to different lower relative humidities.

The foregoing discussion (*Continued on page 162*)

CUSHIONING CURVES

Air Forces study develops graphic method of finding thickness of cushion required to protect a given product when *g*-factor and degree of rough handling are known

The thousands of tons of aircraft parts and equipment moved from factory to front during the war provided the Army Air Forces with a packaging "proving ground" of tremendous scope. Aircraft assemblies damaged during shipment consumed valuable time to repair, time that often could not be spared. The pressure of air warfare was a constant stimulus to AAF technicians to perfect methods which would insure safe delivery to vital materiel. This research was not terminated by the war's end, but has continued to this day under the direction of the Air Materiel Command at Wright Field, Ohio.

A recent study initiated by the Container and Packaging Branch of AMC has brought to light new statistical data relating to the properties and design of cushioning materials. Although primarily concerned with the packaging of aircraft parts and equipment, the results achieved are almost universal in application.

The investigation was conducted by Keith Q. Kellicutt, technologist at Forest Products Laboratory, and subjected to qualitative test 45 materials used as packaging cushions. Many of the tested materials were originally fabricated for other uses but were diverted to cushioning purposes during the peak of wartime shipping. Some of these which have been found highly desirable will remain in general use as cushions in peacetime packaging.

Mr. Kellicutt's main contribution was the creation of a family of design curves which indicate the thicknesses of cushioning materials necessary to provide the desired degree of item protection. Taken, as given, were specified conditions of rough handling, as well as an index of the ruggedness of the item to be packed.

The 45 materials tested were divided into six general groups, each comprising similar physical composition characteristics.

Group I—Cellulose; including plain cellulose wadding, cellulose wadding with various means of embossing and various backing materials, and cellulose wadding fabricated in water-resistant pads.

Group II—Felt, cotton and wool; including those products fabricated, at least partially, from felt or from new or waste cotton and wool materials.

Group III—Wood fibre; including products made from wood fibres, some of these bonded by different materials in the process of fabrication.

Group IV—Shredded paper and corrugated fibreboards.

Group V—Rubber, rubberized fibre and hair; including sponge rubber in different densities, plant fibre and waste animal hair, reclaimed rubber bonded.

Group VI—Glass fibre and glass fibre wadding fabricated into pads.

A more detailed description of the 45 materials, identifying them as to group number and typical design curves illustrated herewith, is contained in Table I.

The estimation of the maximum shock a package will receive in the course of shipment is basic to the calculations of a package designer. The severity or leniency of his estimation is arrived at by a compromise between the desire to insure safe delivery and the desire to keep packaging costs low. AAF shipments in time of war had as their prime consideration delivery of materiel in workable condition, regardless of costs. Normal peacetime packaging may place the emphasis on economics. In the AAF study the shock sustained in a 30 in. drop-flatwise test was selected as standard.

The term "*g*-factor"* is generally used by the aviation industry to describe the amount of shock an instrument can withstand without damage. Often loosely defined, in current AAF research it indicates the ratio of an item's weight to the maximum dynamic shock load to which it can safely be subjected. Algebraically expressed, $g = F/W$ where F is the maximum safe dynamic load in pounds and W the weight of the article in pounds. Thus, if an instrument weighing 1 lb. has a *g*-factor of 100, it can sustain a shock of 100 lbs. without injury.

A single unit or sub-assembly of an article may determine its *g*-factor. Shaft settings of instruments may dislodge under shock of less magnitude than will adversely affect other parts. In some electrical devices porcelain resistors will crack under blows that leave the rest of the instrument unaffected. Practically, there-

* See "Shock Cushioning," MODERN PACKAGING, Aug., 1946, p. 141.

This article comes as a sequel to two previous reports on shock testing and cushioning in these pages ("Shock Cushioning," August, 1946, and "Cushioning Materials," October and November, 1946). In addition to bringing out new facts about a wide range of cushioning materials, it presents a method of estimating graphically the amount of material required for a specific job of protection.

TABLE I—IDENTIFICATION AND DESCRIPTION OF 45 CUSHIONING MATERIALS

Identification No.	*Group No.*	*Figure No.**	*General classification*	*Type of backing or wrap*	*Density, grams per cu. in.*	*Composition*
1	I	1	Wadding	20–60–20 wrap	1.64	Cellulose wadding wrapped with duplex waterproofed kraft paper
2	I	1	Wadding	20–60–20 wrap	1.44	Same
3	I	1	Wadding	Kraft No. 20	1.08	Cellulose wadding punch embossed with kraft backing
4	I	1	Wadding	None	.86	Water-resistant wadding, punch embossed
5	I	1	Wadding	None	1.03	Cellulose wadding, no backing or embossing
6	I	1	Wadding	None	.98	Creped cellulose wadding, no embossing or backing
7	I	1	Wadding	20–60–20 wrap	1.43	Cellulose wadding wrapped with duplex waterproofed paper
8	III	3	Kraft pulp	Gauze lined	.82	Aerated kraft pulp with gauzed sized backing
9	III	3	Kraft pulp	Creped 20–60–20 wrap	1.21	Aerated kraft pulp encased in duplex waterproofed wrap
10	III	3	Kraft pulp	20–60–20 wrap with barrier	1.04	Aerated kraft pulp wrapped in duplex paper with moisture barrier
11	V	4	Rubberized fibre	None	1.19	Cactus fibre, curled, bonded with reclaimed rubber, density 5.3
12	V	4	Rubberized fibre	None	.94	Cactus fibre, curled, bonded with reclaimed rubber, density 9.3
13	V	4	Rubberized fibre	None	.86	Cactus fibre, curled, bonded with reclaimed rubber, density 12.0
14	V	4	Rubber	None	4.66	Sponge rubber, natural soft consistency
15	V	4	Rubber	None	3.95	Sponge rubber, natural medium consistency
16	V	4	Rubber	None	5.54	Sponge rubber, natural hard consistency
17	II	2	Cotton	None	1.17	Waste cotton, shredded jute sisal
18	V	4	Rubberized hair	None	1.00	Animal hair, curled, bonded with reclaimed rubber, soft
19	V	4	Rubberized hair	None	.96	Animal hair, curled, bonded with reclaimed rubber, medium
20	I	1	Wadding	20-lb. kraft	1.24	Water-resistant cellulose punch embossed with kraft backing
21	II	2	Cotton	None	.81	Cotton fibre with glue bond
22	III	3	Wood	Kraft wrap	2.07	Shredded, curled, wood fibre encased in kraft wrap
23	IV		Paper	Kraft wrap	.74	Commercial wax paper, strip shredded
24	IV		Paper	Kraft wrap	1.07	Waste wax paper, strip shredded
25	III	3	Wood	Kraft wrap	1.14	Molded aspen pulp reduced by Asplund process
26–15	III	3	Wood fibre	None	.54	Wood fibre bound with starch, moldproof
26–47	III	3	Wood fibre	None	.53	Wood fibre bound with resin
26–48	III	3	Wood fibre	None	.65	Wood fibre bound with resin
26–56	III	3	Wood fibre	None	1.18	Wood fibre bound with resin
26–72	III	3	Wood fibre	None	1.05	Wood fibre bound with starch, moldproof
26–94	III	3	Wood fibre	None	.71	Wood fibre bound with starch, moldproof
26–106	III	3	Wood fibre	Duplex paper	1.34	Wood fibre bound with resin
33	II	2	Jute	None	1.97	Waste cotton products
34	II	2	Jute	Glue sizing	2.52	Waste cotton products
35	II	2	Felt pad	None	2.64	Felt
36	IV	—	Corrugated fibreboard	Single face	1.37	Corrugation, chestnut face sulfite
37	IV	—	Corrugated fibreboard	Double face	2.52	Corrugation and one face kraft, other face chip-lined jute
38	IV	—	Corrugated fibreboard	Single face	2.12	Corrugation, sulfite with lacquer coat on inner side face, duplex kraft asphalted
39	IV	—	Corrugated fibreboard	Single face	1.97	Corrugation, duplex kraft wax or resin bonded. Face kraft crepe
40	II	2	Jute	None	1.04	Waste, sisal jute, waste cotton
41	VI	—	Wadding	None	.82	1½-in. milled glass fibre
42	VI	—	Wadding	Resin	1.25	XM-PF glass fibre
43	VI	—	Wadding	None	.87	Basic fibre No. 28 Type E glass fibre
44	VI	—	Wadding	None	.47	XM Type C glass fibre
45	II	2	Wadding	None	.94	Sheering, waste wool, clippings

* Figure numbers refer to design curve figures.

fore, the *g*-factor of any item is a measure of the ability of its most fragile part to withstand shock.

Knowing a packaged item's *g*-factor and the degree of rough handling it will receive in shipment, the next consideration of the package designer is the choice of cushioning material, both type and thickness.

Since cushions perform work when absorbing shock, a measure of cushioning quality is obtained when the magnitude of a force performing work on the cushion is determined. This force becomes known only if the depth of the penetration on the cushioning material is known.

Two types of tests were used by Mr. Kellicutt and his staff of researchers in their examination of the force-resisting qualities of the 45 cushioning materials. A static loading test was devised from which the relationship between force and compression could be established as well as the work (FdC) in relation to compression. The second was a dynamic loading test which clarified the relationship between weight, distance of fall and compression.

Few cushion materials have uniform surfaces. Average thickness, therefore, was determined by placing plywood platters 6 by 6 in. in area and 0.52 lb. in weight on cushion samples which rested on smooth surfaces. The thickness was then read as the distance between the smooth surface and the plywood plate.

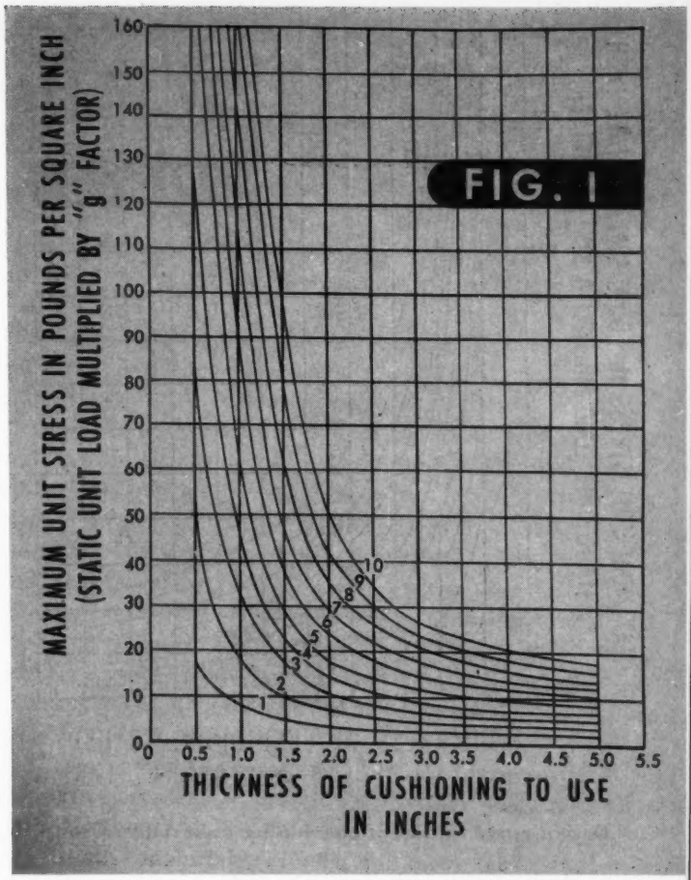
Static loading tests were run with an hydraulic machine which had a range of 0 to 2,400 lbs. and which could be read to 0.5 lb. In operation, a 4- by-4-in. cushion sample covered with plywood was placed in the machine. The plywood acted as a pressure surface for contact with the pressure cylinder. Pressure was applied gradually with load readings taken every 0.1 in. This was continued until 0.7 in. of compression was reached, after which compression readings were recorded for each 50-lb. increase until a total loading of 2,400 lbs. was reached. A record was also kept of the compression after each 50-lb. decrease of load.

Separate stress-composition curves were computed for each sample by dividing the load at each reading by the area of the sample in square inches.

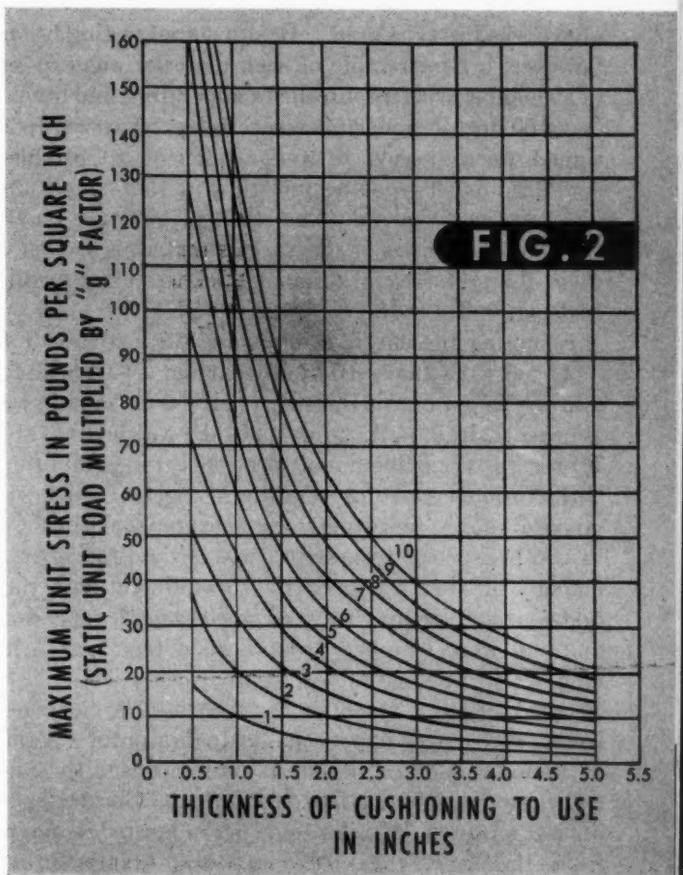
In the dynamic loading tests a 16-lb. hammer having an area of 16 sq. in. on its impact face was dropped between two vertical guides on the plywood-covered cushion sample. A stylus attached to the hammer marked a revolving drum, recording its position during movement and when at rest on the specimen. The hammer was dropped from heights varying from 1 to 7 in. above the top surface of the sample in increments of 1 in. Then, until a height of 30 in. was reached, the fall was increased by 3-in. increments.

During the dynamic loading tests all samples were kept at normal room temperature and humidity. Average conditions were 75 deg. F. and 27% relative humidity. A comparison of magnitude of compression for equal amounts of energy resulting from static and dynamic loading showed them to agree closely.

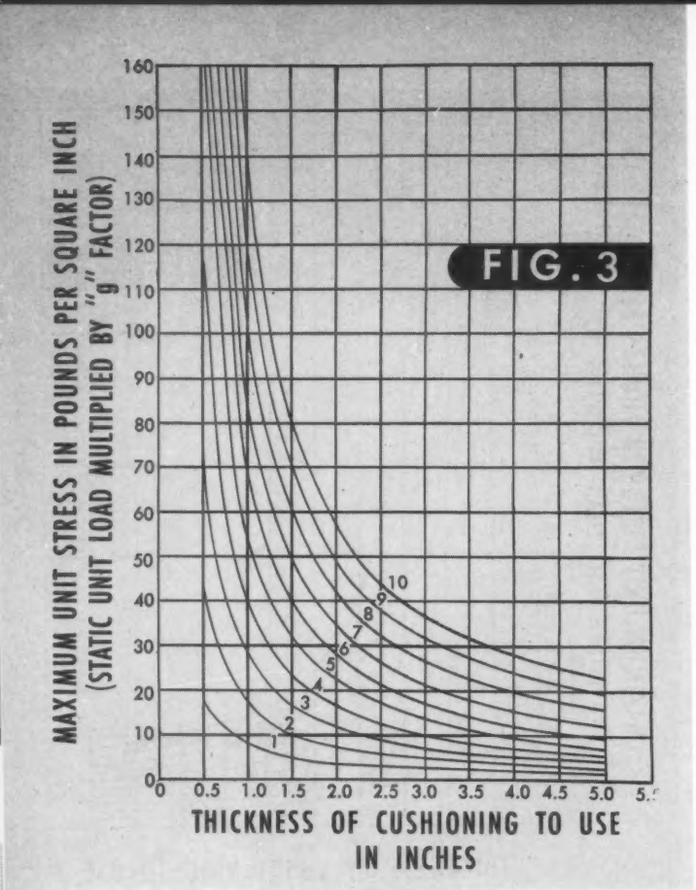
Several other special purpose tests were conducted to clarify further the properties of the cushioning sam-



Design curve typical of cushioning material in Group I.



Design curve typical of cushioning material in Group II.



Design curve typical of cushioning material in Group III.

ples. One of these was to establish the effect of moisture on cushioning quality. The static loading test described above was the type used. Before actual testing began, however, a 2-in. sample of each material was exposed in a chamber with a controlled temperature and humidity of 80 deg. F. and 97%, respectively. Exposure continued for a period of time sufficient to establish equilibrium between the moisture in the sample and moisture in the room. The effect of moisture on the cushioning qualities of the various materials as well as their ability to regain original thickness after loading is shown in Table II.

Exploring the effect of moisture still further, all 45 materials were immersed in water under a 1-ft. head for 3 hrs. Taken out of the water, each 2-in. sample was allowed to drain for $1^1/_2$ hrs. and then weighed. Table III records the cushion moisture content in equilibrium with various moisture conditions together with the physical changes resulting from the water-soak test.

Another special purpose test was devised to learn the amount of dust produced by the different materials under rough treatment. Weighed samples of each material were wrapped around wood blocks $2^7/_{16}$ in. long, $2^5/_{16}$ in. wide and $1^7/_{16}$ in. thick. The blocks weighed 0.18 lb. Sealed in No. $2^1/_2$ cans, the cushioned blocks were placed in a mechanical vibrator for a period of 30 minutes. For 10-minute intervals each the cans rested on top, side and bottom, while the vibrator operated at a rate of 500 vibrations per minute. Removed from the cans, the cushioning was examined and weighed to determine the loss of material. The loose residue left in the containers was an indication of the type and extent of the dusting. With the exception of the sponge rubber materials, all others tested dusted in varying amounts.

Finally, tests in triplicate were made to establish the hydrogen ion concentration (pH) and acid content of each sample, in accordance with the procedure outlined in Joint Army-Navy Specification JAN-P-121. The average of three samples was used to indicate the results. The hydrogen ion concentration varied between the limits of 4.10 to 9.40. Only two materials,

TABLE II—EFFECTS OF MOISTURE AND LOADING ON CUSHIONING MATERIAL

*Cushioning material identification number**	*Cushioning quality adversely affected by increase in moisture*	*Extent of return to original thickness after load of 150 lbs. per sq. in. is removed*	
		Dry	*Moist*
		Per cent	*Per cent*
1	..	39.1	23.0
2	X	33.6	18.5
3	..	37.6	16.1
4	X	32.8	14.4
5	X	33.0	17.0
6	X	30.5	9.7
7	..	32.0	19.3
8	X	37.6	12.0
9	X	36.2	19.0
10	X	34.7	15.0
11	X	52.2	51.9
12	X	43.7	40.0
13	X	40.3	35.3
14	..	90.1	93.2
15	..	94.3	97.3
16	..	97.6	98.0
17	..	48.9	33.0
18	X	55.9	49.8
19	X	84.4	34.3
20	X	30.6	13.8
21	..	36.1	21.0
22	..	51.0	38.0
23	X	12.5	5.3
24	..	12.1	7.6
25	..	38.8	25.5
26–15	..	21.0	10.0
26–47	X	24.0	16.0
26–48	X	29.0	18.1
26–56	..	46.0	21.0
26–72	..	45.0	19.0
26–94	X	30.0	..
26–106	..	46.0	24.0
33	..	58.0	52.0
34	..	65.0	60.0
35	..	85.0	79.0
36	X	45.0	26.0
37	X	54.0	43.0
38	X	46.0	25.0
39	X	43.0	25.0
40	X	39.0	22.0
41	..	63.0	67.0
42	..	52.0	50.0
43	..	76.0	57.0
44	..	74.0	71.0
45	..	58.0	70.0

* See Table I for description of material.

TABLE III—MOISTURE CONTENT OF CUSHIONING MATERIALS IN EQUILIBRIUM WITH VARIOUS CONDITIONS

Cushioning material identification number	*Wt. when oven dry (4 × 4 × 2 in. sample)*	*Moisture in material at room condition* (dry)*	*Moisture in material in equilibrium with 80° F. and 97% relative humidity*	*Moisture in material after being soaked for 3 hrs. and drained for 1½ hrs.*
	Grams	*Per cent†*	*Per cent†*	*Per cent†*
1	58.87	3.55	11.1	50.4
2	43.58	4.31	12.5	101.0
3	40.18	5.64	15.8	182.0
4	37.67	5.53	45.9	392.0
5	38.53	5.80	15.2	484.0‡
6	37.03	5.06	15.5	1,155.0‡
7	49.89	4.76	11.7	894.0‡
8	24.01	6.60	24.9	1,347.0
9	49.76	4.79	15.3	487.0
10	34.87	5.04	19.2	997.0
11	40.54	3.94	21.0	66.2
12	38.75	5.21	21.9	62.8
13	27.42	4.81	26.3	70.6
14	178.23	1.52	9.6	59.1
15	163.38	1.34	7.0	28.8
16	164.95	.83	3.6	14.2
17	41.85	8.23	18.9	1,138.0
18	35.07	5.56	13.1	59.4
19	31.56	4.43	18.0	39.8
20	36.89	3.88	15.6	199.0
21	25.99	7.90	15.2	750.0
22	64.52	7.06	17.8	207.0
23	21.36	6.88	13.9	217.0
24	22.40	12.30	25.1	146.6
25	37.35	3.53	19.4	1,123.0
26–15	19.73	2.34	16.8	1,140.0‡
26–47	18.06	3.21	19.6	2,300.0
26–48	18.34	4.36	17.5	2,400.0
26–56	36.48	3.45	18.0	1,872.0
26–72	37.07	3.15	16.7	1,356.0‡
26–94	17.65	4.58	17.7	1,115.0‡
26–106	48.72	4.55	16.1	1,253.0
33	62.98	7.85	35.5	547.0
34	71.89	8.75	52.7	537.0
35	71.81	8.43	36.8	541.0
36	41.72	6.84	41.2	222.0‡
37	78.89	6.93	47.8	170.0‡
38	59.53	6.17	67.3	99.0‡
39	58.15	8.43	35.8	158.0‡
40	24.55	10.92	117.0	675.0
41	34.36	2.32	6.3	574.0‡
42	14.44	3.62	7.0	1,158.0
43	15.89	3.43	12.3	1,390.0
44	21.15	2.27	7.4	570.0‡
45	27.42	13.90	29.0	1,000.0‡

* Room conditions approximated 75° F., 27% relative humidity.
† Percentage on basis of weight when oven dry.
‡ Structure disintegrated.

No. 20 and No. 21 were considered neutral, both having a pH of 7.00.

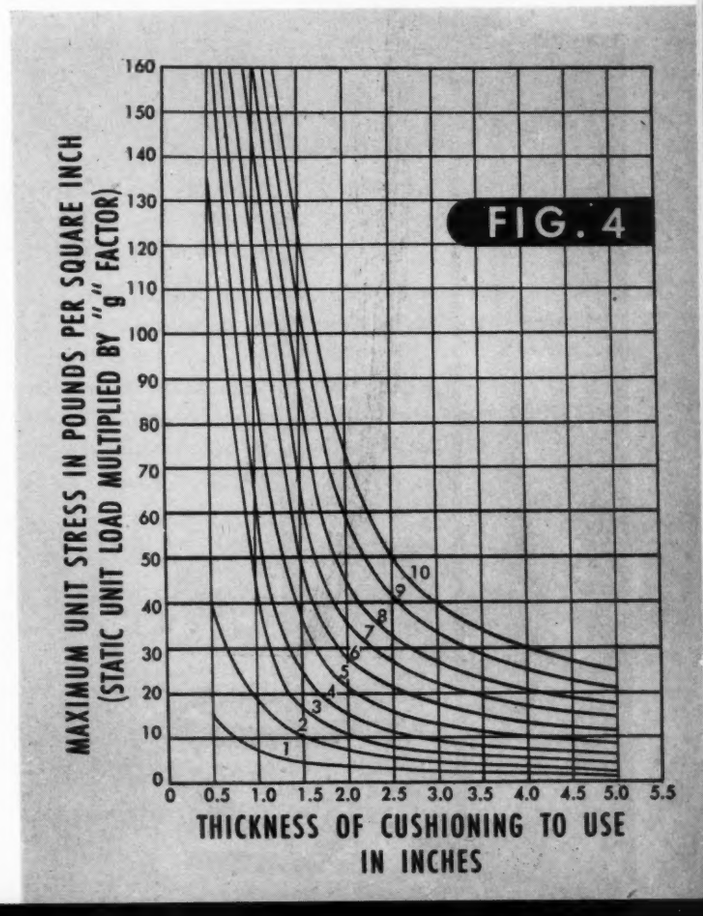
The design curves were replotted from stress-compression and energy-compression curves in order to simplify design computation. For some of the groups an average design curve was plotted for the cushioning materials of the group. Four typical design curves are shown in Figs. 1 to 4. Their value is limited only by the fact that known *g*-factors are rare. To use the curves as a method of comparison between various cushioning media, it becomes necessary to use assumed *g*-factor values.

Safe shock is read along the ordinates, with the required thickness of cushioning read along the abscissas. Each curve represents a definite magnitude of energy. Since samples subjected to tests varied from 1 to 3 in., it was necessary to extrapolate the energy level curves to include thicknesses between 0.5 and 1.0 in., and 3.0 to 5.0 in. Data and extrapolated areas are shown by solid lines. Estimated energy levels are indicated by dashed-line curves.

For a practical illustration of the use of the curves, assume that it is desired to know the thickness of a material in Group I, cellulose wadding, required to protect an instrument weighing 2 lbs. when dropped from a height of 30 in. In addition, assume that the minimum bearing area of the instrument is 10 sq. in. and its *g*-factor is 200. The unit weight, therefore, is 0.20 lb. per sq. in. Dropped 30 in., it will have 0.20 × 30, or 6.0 in.-lbs. of kinetic energy per sq. in. when it comes to rest. The thickness of cushioning should be sufficient to limit the shock due to impact to 0.20 × 200, or 40 lbs. per sq. in.

These factors—unit safe shock and energy—are all the data necessary to design the cushion. Enter the unit safe shock, 40 lbs. per sq. in., on the design curve for Group I materials (Fig. 1), and move horizontally along the 40.0 line until the 6.0 in.-lb. energy curve is intersected. Trace the point of intersection vertically to the abscissa and read the required thickness. In this example it would be about 1.4 in.

Design curve typical of cushioning material in Group V.



PI PACKAGING INSTITUTE

Standard Test Methods

8. Drop test

Definition

Drop test is an index of the durability of a material to a particular kind of shock.

Intent and scope

The drop test is used to find at what height a steel ball 1 in. in diameter will penetrate a material under the specified conditions, temperature, etc.

Reagents and accessories

A. Ring stand (Fig. 1) to which are attached two concentric rings 3 in. inside diameter between which the sample may be tautly clamped.

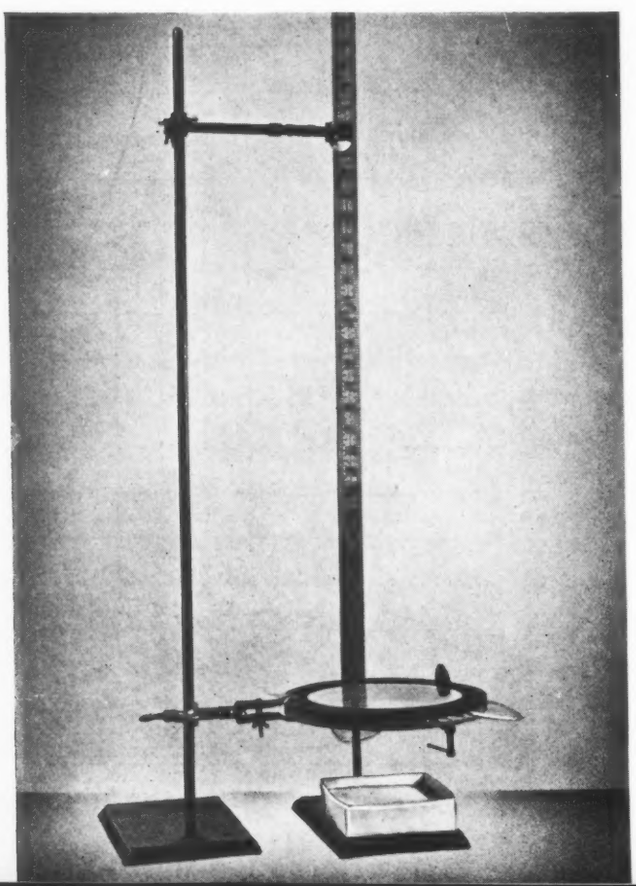
B. A polished steel ball 1 in. in diameter weighing approximately 67 grams.

Test sample

A. Sampling—Ten samples (minimum number) at least 6 in. square are cut from each lot of materials. Five samples are used to obtain average drop value, other samples used to get the range and for retests.

B. Preparation—Samples to be tested at 0 deg. F. should be held at that temperature for 24 hrs. before being tested. Samples to be tested at 70 deg. F. which are not affected by humidity may be conditioned for 4 hrs. before being tested. Materials to be tested at 70 deg. F. which are affected by humidity shall be conditioned and tested under whatever humidity levels are prescribed for that class of materials.

1. Ring stand apparatus for use in the drop test.



Test procedure

A. Standard conditions (70 deg. ± 1 deg. F.)—Clamp the sample tautly between the concentric rings. Drop the steel ball into the center of the sample, starting at an arbitrarily low height such as 10 in. unless some minimum height value has been specified and increase the height of the drop until the sample is pierced. A fresh specimen is always used for each drop,

B. Low temperature conditions (0 deg. ± 3 deg. F.)—The tests shall be performed as described above except that the entire apparatus, including the steel ball and dropping arrangement, shall be held at 0 deg. F. Under these conditions the initial drop shall be made at an arbitrarily chosen low level unless some minimum height value has been specified.

Calculations

Calculating the drop height value, five determinations shall be run and averaged. If any determinations show greater than 20% deviation on the apparent average, a new determination shall be made.

Report

The average height in inches at which the steel ball penetrates the samples in five determinations is reported. The temperature and/or humidity of the test shall also be specified or the statement shall be made that the material fails or does not fail in meeting the specified drop height at the indicated temperatures.

Remarks

The drop height is sometimes specified as the number of inches at which the film shall not be pierced. When the test is made in accordance with such specifications the ball can be dropped from the specified minimum height and it is not necessary to determine the actual height at which penetration of the sample takes place. The material must pass three successive drops or if one of these three fails, two additional samples must be run without a failure. If more than one out of the five determinations fail, the material may be considered as failing to meet the specified drop height determination.

References

AN-P-54.

DAVISON silica gel

prevents caking

Caking and lumping in most crystalline and finely powdered materials may be inhibited by the addition of Davison silica gel—less than 1% often proving effective.

Where it is undesirable to mix silica gel with the product—the same result may be obtained by the addition of a bag of Protek-Sorb* silica gel to the sealed moisture-proof container.

The Answer to a vexing Packaging Problem

Where caking and lumping are caused by moisture forming a film of saturated solution around individual particles, causing them to adhere, Davison silica gel in most instances will take up this moisture in contact with the material (in a sealed moisture-proof container) and present a dry, free-flowing product to the consumer.

Davison silica gel is chemically inert to the ordinary acids and their salts—and is non-toxic. It cannot, however, be used with strong alkalies and should not be used mixed with the product where a slight turbidity (harmless) is undesirable in the resulting solution.

*Reg. U. S. Pat. Off.

Caking and lumping make up a vexing problem in many fields—from bulk chemicals in drums to packaged foods, pharmaceuticals and cosmetic powders.

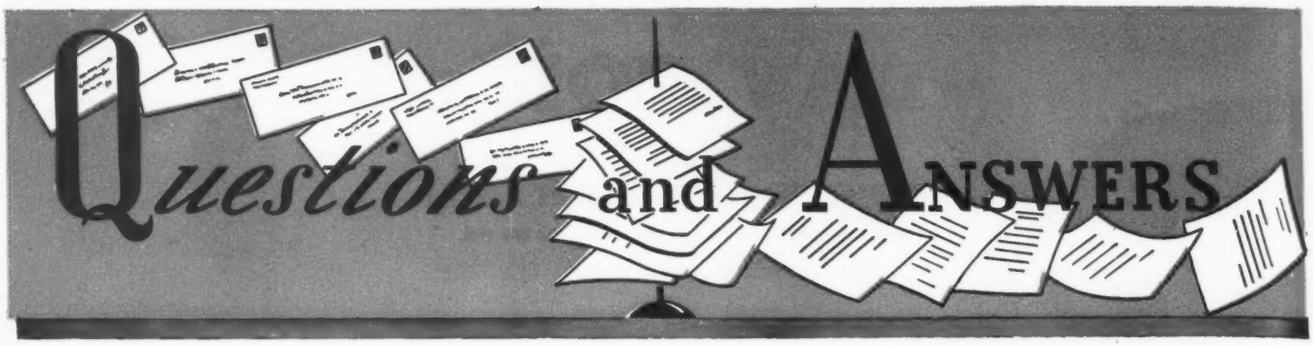
Caking and lumping not only make some products unattractive to the eye but are time wasters in that material must be dug out of containers . . . it is also difficult to weigh or measure caked material. A free-flowing powder is often required in order to accomplish packaging with automatic machinery. Consult the Davison technical staff, which is at your service, for problems in this field.

THE DAVISON CHEMICAL CORPORATION

Progress through Chemistry

BALTIMORE 3, MD.

Canadian Exclusive Sales Agents for PROTEK-SORB silica gel • CANADIAN INDUSTRIES LIMITED • General Chemicals Division



This consultation service on packaging subjects is at your command. Simply address your questions to Technical Editor, Modern Packaging, 122 East 42nd St., New York 17, N. Y. Your name or other identification will not appear with any published answer.

Wax-coated metal foil

QUESTION: We are British manufacturers of certain paper products and are interested in more information about a packaging material which we have heard is quite common in the United States. We refer to the use in packaging of metal foil coated with wax in which papermaking fibre has been dispersed, the object being to obtain the special properties of the wax coating plus a strong heat seal. There is an account of this material in Packaging Pamphlet No. 16, "The Peacetime Application of Wartime Packaging Development," published by the American Management Assn. If possible, we wish to obtain a fuller account and samples of the wax-coated foil described and shall be pleased if you can help us to do this.

ANSWER: The type of material which you mention is manufactured by several companies in this country. These heat-sealing materials have the advantage over conventional wax-coated materials in that they do not have a wax on any of their surfaces, there is no danger of blocking or adhesion in the rolls or any tackiness or sealing except at the point where heat has been applied. Depending upon the composition of the material and the wax mixture, these structures have been used for manufacture of bags and printed wrappers for a great many products and end uses.

The basic structure has a great many possible combinations but the heat-sealing side always consists of a relatively thin tissue which has been laid down over and partially saturated with a waxy composition. These wax mixtures are usually modified amorphous waxes, the modifications being of such a nature to improve the seal strength, flexibility, flow characteristics, etc.

Upon the application of heat to this structure, the waxy material flows completely through the tissue and effects a seal to any other surface in contact with it. Structures of this kind have been made using a cellophane, a waxy layer and a tissue. Other structures have been made using a thin aluminum foil glue mounted to paper, the waxy layer and then a tissue.

The important considerations are the amount and formulation of the waxy mixture and the construction and weight of the overlaid tissue. Particular samples have been composed of about 6 lbs. of wax per thousand sq. ft. of surface and overlaid with a paper which was approximately $^{6}/_{10,000}$-in. thick and weighed approximately $3^{1}/_{3}$ lbs. per thousand sq. ft. The paper may be described as a long fibred, lightly calendered tissue. There is a possibility, of course, that there may be patents pending for this type of structure.

It is suggested that you refer to the several suppliers of this type of material for further information about the patent situation and other details concerning this type of packaging material.

Metal versus paper for holding flavor

QUESTION: We are interested in learning whether any experiments or studies have been made in which a comparison of flavor-holding ability of metal versus cardboard containers was tested.

ANSWER: Your question concerning the flavor-holding ability of metal versus cardboard containers is very interesting. It is doubtful that there have ever been any direct comparisons made but certain general conclusions can be reached based on the known properties of such containers and past experiences.

Metal containers of the hermetic type, of course, would not transmit any odor through their walls and so this discussion will be confined to the so-called general line cans which have varying mechanical porosity, depending upon their design, construction and other details. Such a general line can could be made nearly as tight as a hermetic can providing the seals and ends were gasketed and the closure made with suitable liners and sealing compounds. However, most of these types of metal packages have some degree of mechanical porosity in the seams and closures and the amount of flavor lost would depend upon the extent of these mechanical openings—that is, their frequency and size, as well as upon the vapor pressure of the volatile or flavor ingredient. In any case it is presumed that the flavor material is stable and will not oxidize or be lost except by migrations through the container walls.

Any package made of untreated paper or paperboard can be expected to have no resistance to rapid penetration by any and all organic vapors. However, certain papers such as glassines (*Continued on page 172*)

Equipment and Materials

PORTABLE TABLE TACKER

A foot-operated table tacker that is sturdily built, yet light and portable, requiring only 2 sq. ft. of floor space, has been announced by The Heller Co., Cleveland, Ohio. It has a built-in steel table, and the operating mechanism is said to be so well balanced that it gives the operator speed with little fatigue. Since it is foot-operated, the operator's hands are free to assemble and hold material. The servicing of the machine is said to be negligible and the machine, it is claimed, will withstand heavy duty, constant operation. The points of wear are treated steel and the tacking head may be replaced in a matter of minutes. The construction of the head is such that it does not require oiling and accommodates a long strip of staples through the front gate in a few seconds.

"DEFINITE LENGTH" TAPE DISPENSER

The Tape-Saver—a dispenser for pressure sensitive tape in definite lengths, in widths up to one inch—is a product of A-L-B-E Engineering Co., West Orange, N. J. This machine accommodates a one- or three-inch tape core, and by simply setting the indicator on the side of the machine at the desired length, then pressing down the lever, the tape is ejected—cut off and ready for use in lengths of 3/8 in. to 3 in. A variation for use in production lines can be made by adjusting the dispenser to cut long strips which are perforated at required lengths. When used for short lengths, the dispenser is said to effect considerable savings.

PHOTOELECTRIC COUNTING DEVICE

Photoswitch, Inc., Cambridge, Mass., has developed a general purpose photoelectric counter, which is said to be available at low cost, having an operational speed up to 600 counts per minute. Known as Counter Type Pl, this device consists of a photoelectric control, light source and electric counter. The makers reccomend it for high speed counting in can and box manufacturing, for counting small objects, glass tubes and bottles, for selective counting by height or length and for counting the output of punch presses and screw machines. The maximum number of counts, before returning to zero, is 99,999. The entire combination of equipment, the company states, can be installed quickly without the aid of an electrician.

NEW RIGHT-ANGLE CREASER FOR SHEET PLASTICS

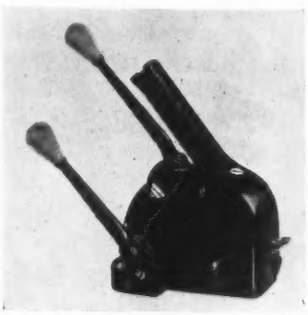
Tabler Instrument Co., North Tonawanda, N. Y., announces the development of still another machine for creasing or folding cellulose acetate, ethyl cellulose, vinyl acetate and cellulose nitrate at right angles. The new unit, known as the "Thermo-creaser," forms a 90 deg. crease in sheeting up to 30 in. wide and is said to provide, among others, the advantages of greater output, high quality creases or folds, simpler operation and easier maintenance. Primarily designed for use in fabricating square set-up boxes and other types of transparent packages requiring creasing at right angles, it is hand-fed and foot-operated. The machine incorporates a thermostatically controlled blade which releases heat into the sheet stock, softening and creasing it as the blade presses the material into a metal forming die or a resilient rubber pad. Time required for creasing or folding varies with the type and thickness of material in use. Streamlined in design, with smoothly rounded corners and free of recessed edges, the machine may be maintained in spotless operating condition so as to prevent soiling of sheet by dust, dirt and grime. No lubrication whatever is required. It operates on 115- or 230-volt AC or DC circuit, is 41 in. wide, 25 1/2 in. deep, 42 1/2 in. high and weighs approximately 380 lbs.

NEW PRINTING PRESSES

A new line of multi-color rotogravure and rotary letter presses for package, label and wrapper printing has been announced by the Graphic Arts Sales Division of the Sperry Corp., Long Island City, N. Y. Designed with a view to covering the special requirements of printing such packaging materials as foil and cellophane, these new presses have been built, the company claims, in accordance with specifications of leading printers. Of special interest to the boxmaker, it is said, is a new rotary cutting and creasing unit which can be used in conjunction with the printer. This makes possible multi-color printing, cutting, creasing and stripping at high speeds in a single straight-line operation.

LIGHTWEIGHT STEEL STRAPPING TOOL

A new streamlined combination steel strapping tool which is said to be faster and lighter in weight has been made available by Acme Steel Co., Chicago. This device, known as the Acme #3 Steelstrapper, weighs only 6 3/4 lbs. and is easy to handle, either mounted or unmounted. It may be operated on a flat surface of just five inches, the makers claim. The tool has two levers, one for tensioning and the other for sealing and cutting the strap from the coil of steel strapping. Thus, just two strokes are required to tension, seal and cut the strap. The counter action of the levers produces a balance on the strapping surface. The unusual speed of the tool is accounted for by the short distance the levers cover. They automatically return to the starting position after the sealing operation is completed.



The seals—which join the two loose ends of strap around the package—are automatically fed from a magazine (which holds a supply of 100 seals) into the sealer jaws. A safety latch on the tool automatically aligns the strap and a strap retainer holds the cut-off end of strapping and holds it conveniently available for the next threading operation. The machine is made to handle 1/4, 3/8, 1/2 in. by .010 to .020 in. sizes, both flat and tight edge.

IMPROVED LABELING MACHINE

Vac-Spray Machine Corp., Minneapolis, Minn., announces that over 25 additional refinements, developed within the last year, will be incorporated in all its 5B labelers produced during 1947. This versatile machine applies (*Continued on page 176*)

THE ROSS WAY IS THE NEW WAY

Control Dial No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22			
½ OZ. SIZE		21½	25¼	25¼	24½	20½	13½	11¼	14½	8½	19¼	16¼	14¾	11	4½	24½	27½	21	12¾	17¾	27½				
¾ OZ. SIZE		20¾	20¼	25¾	19½	15¼	17	14½	9¾	9¾	14¾	16	12	13¼	8¼	15	26	18¾	12½	16	26½				
1 OZ. SIZE		19¾	22	27	22¼	16	16½	13½	9	10¾	13¾	15¾	9	13¼	10¼	17½	25¾	15¾	9¼	12¼	24½				
2 OZ. SIZE		13½	14¼	28	13½	6½	24¼	21¼	3¼	8¾	7½	16¼	4¼	12	17	10	24¾	10	3¾	5¾	18				
2½ OZ. SIZE		9¾	10	29	9¾	3½	28	25¼	-1¾	8	3¾	15¾	½	12	20	6	23¾	6¾	½	3½	14½				

Note: Blank spaces left for any additional carton that might be added to the range. No. 1 adjustment is for the carton magazine. The magazine adjustment is made by putting the carton into the magazine and adjusting angles to suit. All other adjustments are made by setting dial control adjustments by number to point indicated on scale. Additional sizes can be run between minimum and maximum range of machine by making the proper dial settings and recording.

This fully automatic ROSS Cartoning Machine is designed to handle any number of size cartons within this machine's range.

A change to another size carton can be made within ten minutes—without the substitution or addition of interchangeable parts.

The ROSS machine inserts bottle and literature and is available for handling:

1. Straight tuck or reverse tuck cartons
2. Seal-end cartons
3. Top tuck, sealed bottom cartons

PRECISION PARTS • DIAL CONTROL • MASTER SPEEDRANGER •
SELF OILING • HIGH PRODUCTION • VERSATILE ADJUSTABILITY

ROSS
ROCKWELL
SUBSIDIARY OF THE ROCKWELL MANUFACTURING COMPANY
A. H. ROSS Co. Inc.
PACKAGING MACHINERY · LUDLOW, KY.

2

A. H. Ross Co., Inc., Ludlow, Ky.

Gentlemen: Please send me without obligation, Catalog and Data on ROSS Automatic and Semi-automatic Cartoning Machines.

COMPANY_____

NAME_____

CITY_____ STATE_____

Plants and People

Hinde & Dauch Paper Co.'s new factory, located at 70 Grove St., Watertown, Mass., is now in production. The building is of concrete, brick and steel construction, 200 by 700 feet, one-story box plant and two-story office, with a storage basement 90 by 200 feet. The company claims that it is the most modern shipping box plant in the country. Included in it are a large recreation room for employees, shower and locker rooms and a well-equipped first-aid room.

Carl A. Claus

Carl A. Claus has been appointed vice president in charge of eastern sales of the **J. L. Ferguson Co.,** Joliet, Ill., manufacturers of **Packomatic** packaging machines. **Mr. Claus** was formerly associated with the **New Jersey Machine Corp.** The company has opened offices in Newark, N. J., and Boston. All eastern branches will be directed from Newark.

William I. Myers, dean of the **New York State College of Agriculture at Cornell University,** and **Frank L. Elmendorf,** vice president of **Robert Heller & Associates, Inc.,** were elected directors of **Continental Can Co.,** at a recent meeting of the board in New York.

Ohio Boxboard Co. has announced the appointment of **Lockwood C. Barr** as manager of the company's New York sales office. Formerly with the **Robert Gair Co., Mr. Barr** served for three years as a lieutenant in the Navy.

Grand-City Container Corp. is now constructing a 300,000 sq. ft. one-story factory in North Bergen, N. J. It will be used to house all operations of the corporation and its affiliate, the **Federal Carton Corp.**

Benj. C. Betner Co. has announced the opening of a new bag factory in Appleton, Wisc. The Appleton site was chosen for its location in the center of the paper making country and its proximity to many of the company's customers. The plant will have its own source of supply and, in serving this section, will remove a load from the company's other plants. Construction is in line with the policy of locating plants in various sections of the country in order to enable quick and economic service for all territories. The Appleton plant will trade as the **Benj. C. Betner Co. of Wisc.** and is being operated in conjunction with the **Tuttle Press Co.,** of Appleton. Other **Betner** plants are in Devon, Pa., Richmond, Oklahoma City, and Los Angeles.

Celanese Corp. of America has established the Celanese Corp. Fellowship in Chemical Engineering at the **University of Michigan.** It is for a term of five years from the time of the appointment of the first recipient and subjects to be investigated are plastics and high polymers.

B. E. Stover, for 35 years associated with **Wheeling Stamping Co.,** has retired as general sales manager. He has been succeeded by **Charles B. Hart,** who has been assistant sales manager since 1934.

Stein, Hall & Co., Inc., importers and manufacturers of adhesives and other industrial commodities, has opened a New York sales branch office in the Empire State Building, New York.

The Reynolds Metals Co. has acquired the government-owned Newark, Ohio, aluminum rolling mill from the War Assets Administration under a five-year lease with an option to purchase. The plant, with approximately 28 acres under roof, was built by the Government during the war at a cost of $23,200,000 as a part of the Government aluminum program.

Herman L. Brooks has purchased the **Alexandra de Markoff Facial Preparations Co.** and affiliated companies, **Alexa Perfumes** and **Prince George Men's Line. Martin de Markoff,** founder of the business, will continue to assist in the packaging, designing and creation of new products. Showroom and offices will remain at 642 Fifth Ave., New York.

Arthur R. Jorgenson

National Can Corp. announces the appointment of **Arthur R. Jorgenson** to the position of division sales manager **Mr. Jorgenson,** well known to the trade in his 16 years of selling for **National Can,** will continue his duties with headquarters at the New York offices of the corporation.

Cupples Co., St. Louis, announces the appointment of **Francis B. Comer** as vice president, general sales manager and member of the board of directors.

John Ekern Ott

Acme Steel Co. has made several organizational changes. **C. J. Sharp,** formerly vice president and director of sales, was named to the newly created office of executive vice president. **John Ekern Ott** is general manger of consumer products, covering such items as steel strapping, wire and machines for their application.

L. E. Van Sickle has retired as head of the kraft paper department of **West Virginia Pulp & Paper Co.** after 45 years of service. **Alfred S. Nalle** succeeds him.

Monsanto Chemical Co. has made several changes in its organizational set-up. **Robert B. Semple,** formerly petroleum chemicals sales manager, is now director of **Monsanto's** general development department. **John Wade Newcombe** will succeed **Mr. Semple** as petroleum chemicals sales manager. **William G. Krummrich** is now assistant organic chemicals division manager and **David L. Eynon, Jr.,** formerly assistant to the division general manager and acting plant manager of the company's Nitro, W. Va., unit, will succeed **Mr. Krummrich** as division production manager. In the plastics division, **Carl F. Graesser** has been named sales manager of thermosetting molding materials. **C. L. Richards, Jr.,** formerly branch manager of the division's St. Louis office, assumes **Mr. Graesser's** old position as assistant sales manager of thermosetting molding materials. **T. J. Martin,** formerly a salesman in the division's Connecticut territory, has been named St. Louis branch manager. **W. H. Face** has been named assistant to the sales manager of thermoplastic molding materials.

The Brooklyn sales division of the **Bemis Bro. Bag Co.** has announced the opening of a sales office in Pittsburgh, under the management of **Ellis H. Deitrick.** The new office is at 6070–71 Jenkins Arcade.

Fred Houser has retired as superintendent of the Memphis plant of **Bemis Bro. Bag Co. Louis E. Pounders,** former assistant superintendent, succeeds **Mr. Houser,** who had held the position for 25 years. **Mr. Pounders** has been with the firm at Memphis since 1936.

A. M. Freeman has been appointed di-

The trade name, Eastman Acetate Sheet, has been discontinued

FROM now on, all types of the Eastman Kodak Company's cellulose-ester sheet... whether thick or thin... will be distributed under the trade name, Kodapak... the name formerly applied only to gauges .002″ and thinner. Kodapak will come in two forms: Kodapak I, cellulose acetate... and Kodapak II, cellulose acetate butyrate.

Both Kodapak I and Kodapak II will be distributed in full-width rolls, approximately 40″ wide... in slit rolls... in stock-size sheets... and in cut-to-size sheets.

We regret that the current supply of Kodapak is not sufficient to meet continually increasing demands. But the Kodapak Demonstration Laboratory in Rochester is available to give aid and advice on uses and fabrication of Kodapak.

CELLULOSE PRODUCTS DIVISION
EASTMAN KODAK COMPANY, ROCHESTER 4, N. Y.

Kodapak

Attracts... Protects... Sells

*T.M. Reg. U. S. Pat. Office

Kodapak I
(cellulose acetate)

Clear Transparent

- No. 88 (0.00088″)
- No. 100 (0.00100″)
- No. 120 (0.00120″)
- No. 150 (0.00150″)
- No. 200 (0.00200″)
- 3 thousandths (0.003″)
- 5 thousandths (0.005″)
- 7½ thousandths (0.0075″)
- 10 thousandths (0.010″)
- 15 thousandths (0.015″)
- 20 thousandths (0.020″)

Matte

- 3 thousandths (0.003″)
- 5 thousandths (0.005″)
- 7½ thousandths (0.0075″)
- 10 thousandths (0.010″)

Colored Translucent

- 3 thousandths (0.003″)

Currently available in white, ivory, peach, blue, green, pink, yellow, orchid, and gold.

Special

- Gummed Kodapak
  - No. 120 (0.00120″)
- Black Kodapak
  - 7½ thousandths (0.0075″)

Kodapak II
(cellulose acetate butyrate)

Clear Transparent

- No. 90 (0.00090″)
- No. 110 (0.00110″)
- No. 130 (0.00130″)
- No. 160 (0.00160″)
- No. 200 (0.00200″)

White Translucent

- No. 160 (0.00160″)

Kodak

rector of technical service of the **Casein Co. of American Div.** of the **Borden Co.** Included in his responsibilities will be general supervision of the division's advertising and technical literature.

The New York Life Insurance Co. and the **Continental Can Co.** have completed an agreement under which the **New York Life** will play a major role in financing new manufacturing facilities required for **Continental's** postwar expansion program. The agreement provides that **New York Life** will purchase several new plants which are under construction or will be built to increase **Continental's** production of containers and will then lease the properties to **Continental** for a term of years. Indications are that the over-all amount of the financing will probably be in the neighborhood of $10,000,000.

Glass Containers, Inc., a wholly owned subsidiary of **Fibreboard Products, Inc.,** has announced the following appointments: **Francis W. McDonald** as vice president and general manager; **W. E. Boschin,** assistant general manager; **Vernon Rust,** resident manager at Los Angeles, and **A. C. Larsen,** resident manager at Antioch, Calif.

Dr. Theodore L. Swenson has been appointed special assistant to **Dr. Louis B. Howard,** chief of the **Bureau of Agricultural & Industrial Chemistry** of the **U. S. Dept. of Agriculture. Dr. Michael J. Copley** has been named to succeed **Dr. Swenson** as director of the **Western Regional Research Laboratory** of the **Department of Agriculture,** Albany, Calif. **Dr. Swenson** has directed the **Western Regional Research Laboratory** since its creation in 1938. **Dr. Copley** formerly served as head of the **Analytical & Physical Chemistry Div.** of the **Eastern Laboratory.** Prior to his connection with the **Department of Agriculture,** he taught for 14 years in the chemistry department of the **University of Illinois.**

Dr. Michael J. Copley

Walter Stern, artist and director of package design and package engineering, has been appointed by **Barnes & Reinecke, Inc.,** Chicago designers and engineers, to direct package design activities. **Mr. Stern** was formerly package designer and typographer for **Vogue Wright Studios,** and has most recently been associated with **Spiegel, Inc.,** as package designer and engineer. He authored two articles for MODERN PACKAGING in connection with his work at **Spiegel.**

Kinsey N. Merritt has been appointed vice president in charge of traffic of **Railway Express Agency,** succeeding the late **C. A. Frey.**

The Econ-O-Seal Co., Indianapolis, manufacturers of pre-formed aluminum single closures for milk bottles and of feeding and capping equipment, has announced the appointment of **F. A. Wiley,** of Kansas City, as a divisional sales manager.

Browning, Young & Nimmo has been incorporated under the name of **Northeast Paper Converters, Inc.** The three former partners are now officers of the corporation, with **Robert K. Nimmo** president, **Dwight L. Browning** treasurer and **Nicholas B. Young** secretary. The firm is located at Pawtucket, R. I.

Duane Machinery Corp., manufacturer of power conveyors, has moved from 51–57 Franklin St., New York City, to larger quarters at 2900 Review Ave., Long Island City, New York.

Swindell Brothers, Inc., Baltimore, has announced the election of **Joseph B. Scott** as vice president. He is also a member of the board of directors. **Walter S. Nuckols,** manager of the New York sales office, has been elected a director of the company.

Paisley Products, Inc., Chicago, has announced the purchase of the **Lignotite Co.,** Chicago. The purchase included all formulas, manufacturing processes, technical and customer records and supplies.

Pacific Coast distributors for the closure division of **Armstrong Cork Co.** and **"Cel-O-Seal" Div.** of **E. I. du Pont de Nemours & Co., Inc.,** held their annual sales meeting recently at the Mark Hopkins Hotel in San Francisco. Discussions in round-table forum included present and future sales problems, closure sales possibilities for 1947, long term sales analysis, new products and advertising.

Devon Products, Inc., was organized by **Louis D. Deverich** several months ago for the manufacture of fine paper boxes, particularly for the cosmetics and jewelry fields. The firm occupies a modernized building of approximately 8,000 sq. ft. at 612 Waverly Ave., Mamaroneck, N. Y. **Mr. Deverich** was formerly with **The Warner Bros. Co.,** Bridgeport, Conn., and **Karl Voss Corp.,** Hoboken, N. J.

Thomas L. Jefferson & Associates, package consultants and designers, have established offices at 509 Fifth Ave., New York. The firm also procures materials and machinery.

Monsanto Chemical Co. has announced the formation in Seattle of a Western division as a major industrial unit to supervise the firm's Pacific Coast operations. The four plants comprising the new division formerly were units of **I. F. Laucks, Inc.,** which are now subsidiaries of Monsanto.

Peter J. Massey, general manager of the **Bryant Paper Co. Div.** of the **St. Regis Paper Co.,** Kalamazoo, Mich., will receive the 15th gold medal of the **Technical Assn. of the Pulp & Paper Industry** when **TAPPI** has its annual luncheon at the Commodore Hotel, New York, on Feb. 27. The medal is the principal award made in the pulp and paper industry and is given to recognize an individual who has made an outstanding contribution to the technical advancement of the industry. Mr. Massey has made pioneer efforts and achievement in the development of the process of coating papers at high speed on the paper machine. He was formerly assistant to the president of the **H. P. Smith Paper Co.,** where he developed several special packaging papers used by the Services during the war.

Peter J. Massey

Karl Voss Corp., Div. of Shoup-Owens, Inc., has leased a new factory at 340 Claremont Ave., Jersey City, N. J., as part of an expansion program to increase manufacturing facilities for hand-made cosmetic and perfume boxes. This and another branch plant at Hackensack, together with the main division at Hoboken, will provide a well-rounded service for the production of hand-made boxes, the company says. Shoup-Owens, Inc., at Hoboken, produce all classes of machine-made boxes for many other industries.

Harry D. Randall, formerly with the plastics division of General Electric Co., is now vice president of **William L. Marshall, Ltd.,** New York, distributors of plastic materials.

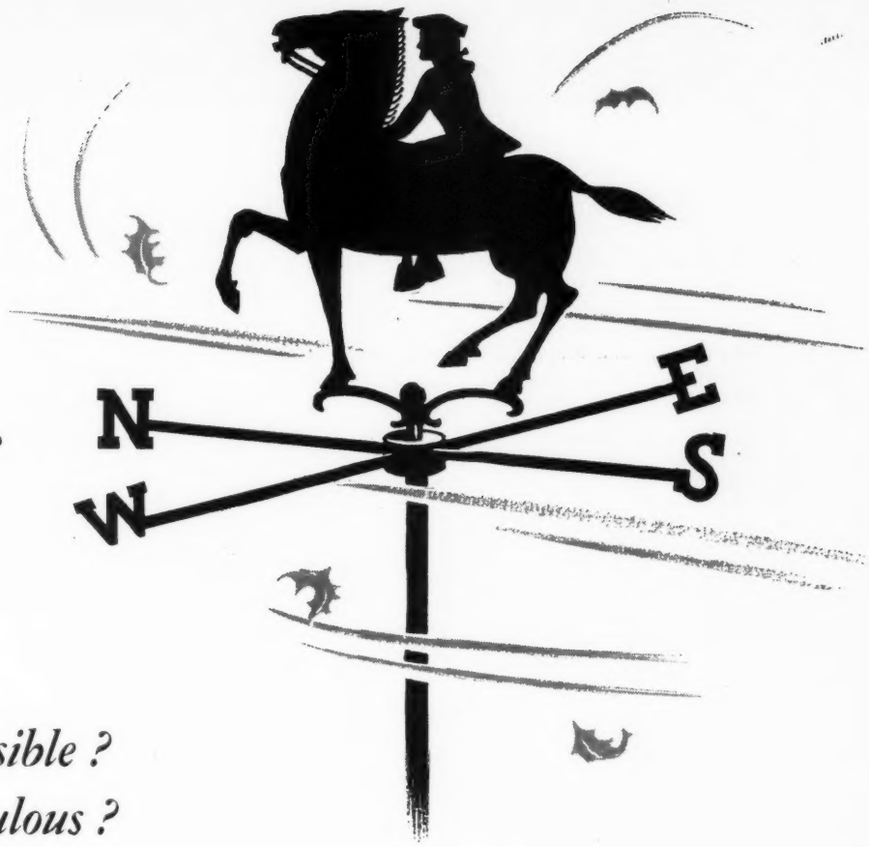
Theodore H. Levy, managing director of **Theo. H. Levy Pty., Ltd.,** Melbourne, Australia, will visit the United States during March and April. His firm is sole Australian agent for many American firms. **Mr. Levy** will make his headquarters while here at Benjamin & Johnes, 159 Madison Ave., New York.

S. Posner Sons, Brooklyn, suppliers of packaging materials, protective and industrial papers, have purchased an office building and warehouse at 22–23 Borden Ave., Long Island City, N. Y.

Jacob Kindleberger, chairman of the board of the Kalamazoo Vegetable Parchment Co., Parchment, Mich., died Jan. 1.

Joseph O. May, head of the printing department of **Sun Chemical Corp.,** died recently. **Mr. May** organized the corporation's printing department in 1929 and remained in charge of it until his death.

...“he rode off in all directions”...



Impossible ?
Ridiculous ?
Depends on how you look at it.

For, in a sense, that's what Dewey and Almy does with its program of "related research"—sends the exploratory minds of chemists into a dozen different byways of organic and colloidal chemistry. But what's important is that from each of these different branches—from the DAREX Insole to the DAREX Sealing Compounds for your cans—information flows in to a common pool of knowledge. An advance in technique or in fundamentals in any one direction brings immediate benefits to every other section of research. Sharing a common basis, all DAREX products are linked through research; the fruits of this research make possible a continuing program of improvement in all products.

In fact, we think that the best way to bring you improved thermoplastic coatings and laminants is to bring as many slants of knowledge to bear upon your problems as we possibly can. That's why DAREX laminating adhesives and thermoplastic coatings are always improving; that's why they are *better* for your needs, "research designed" for your requirements.

Research keeps Darex Products years ahead

DEWEY AND ALMY CHEMICAL COMPANY
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For Your Information

Mason Rogers, new president of the **Packaging Institute,** has announced that he is preparing for 1947 a program of activities designed to strengthen the organization's position and increase its usefulness to the membership. The Institute's annual banquet has been set for the Starlight Roof of the Waldorf-Astoria on the evening of April 7; meeting that day also will be three standing committees: standards and practices, advisory council and the technical committee. This date was arranged for the convenience of those attending the **Packaging Show** which opens in Philadelphia the following day. **Kenneth C. White,** of **Owens-Illinois Glass Co.,** chairman of the public relations committee, has sent letters to editors of leading trade and press publications thanking them for their "unusually cooperative and intelligent coverage" of the Institute's recent Chicago meeting.

Mason Rogers

The Chicago Professional Paper Group recently presented a panel discussion stressing the importance of preparing paper surfaces for good printing. At a meeting, members heard **John E. Halladay,** industrial process consultant, Elkart, Ind.; **W. A. Kirkpatrick, Allied Paper Mills,** Kalamazoo, Mich., and **Fred Weymouth, International Printing Ink Div., Interchemical Corp.**

Between 16,000 and 18,000 canners, preservers, picklers and other processors responsible for packing 85 to 90% of the nation's canned and glassed foods met in Atlantic City during the week of Jan. 19 to focus their views on the 1947 outlook for canned food and food canners. This 40th annual convention of the **National Canners Assn.** featured a panel discussion analyzing the over-all problems expected to confront canners this year.

The first **National Materials Handling Exposition** was held recently in Cleveland's Public Auditorium. Highlighting the show—the first national exhibition devoted exclusively to materials handling—were a machinery demonstration by the **American Warehousemen's Assn.,** panel discussions by industrial leaders and films on materials handling.

New York University is offering for the second time a course in printing ink technology, given from Feb. 7 to May 23. **William S. Hodgkiss,** of the **Sun Chemical Corp.,** is directing the course.

Howard Publishing Co. has just released its 1946–47 edition of the *Source of Supply Directory*. Retailing for $2, the volume may be obtained from the company, 1810 Conway Bldg., Chicago 2.

The **Technical Assn. of the Pulp & Paper Industry** has issued the third in a series of monographs entitled "Starch for Paper Coating." Non-members of TAPPI may obtain the monograph from the association at 122 E. 42 St., New York 17, at $5 per copy.

Estimates of 4,000 to 9,000 representatives of frozen food packers distributors and brokers, cabinet-makers, preservers, bakers, supermarkets and chain stores, retailers and institutional and industrial buyers are being made for attendance at the first meeting and exhibit of the **National Assn. of Frozen Food Packers. E. J. White,** chairman of the convention and exposition committee, has announced that activities are scheduled for March 19 to 21 in San Francisco's Civic Auditorium. The problems of supply, equipment, technology and distribution of the entire industry will be aired at the convention. Assisting Mr. White in arrangements are **E. D. Huddleson,** of **Honor Brand Frosted Foods; C. C. Seabrook,** of **Deerfield Packing Corp.; H. A. Carpenter, Olney & Carpenter, Inc.; Carl Kolb,** of **Birds Eye-Snider Div., General Foods Corp.; F. J. Becker, Gresham Berry Growers; Ed Watson,** of **Pictsweet Foods, Inc.; S. A. Moffet,** of **S. A. Moffet Co.; Joseph Braden,** of **Richmond-Chase Co.;** and **M. T. Fannaly,** of **Marion T. Fannaly, Inc. Clapp and Poliak, Inc.,** Empire State Bldg., New York 1, is managing the exposition.

What's doing

Feb. 23—**American Paper & Pulp Assn.,** Waldorf-Astoria Hotel, New York, N. Y.

Feb. 24–28—**American Society for Testing Materials,** Benjamin Franklin Hotel, Philadelphia, Penna.

March 7—**Canners League of California,** Fairmont Hotel, San Francisco, Calif.

March 10–11—**National Marketing Conference,** Domestic Distribution Department of the U. S. Chamber of Commerce, Stevens Hotel, Chicago, Ill.

March 13—**Drug, Chemical, Allied Trades** dinner, Waldorf-Astoria Hotel, New York, N. Y.

March 19–21—**National Assn. of Frozen Food Packers,** exposition and annual meeting, Hotel St. Francis, San Francisco, Calif.

March 31–April 4—**Frozen Food Institute, Inc.,** annual convention, Boston, Mass.: education congress, Copley Plaza Hotel; frozen foods equipment and trade show, Horticultural Hall.

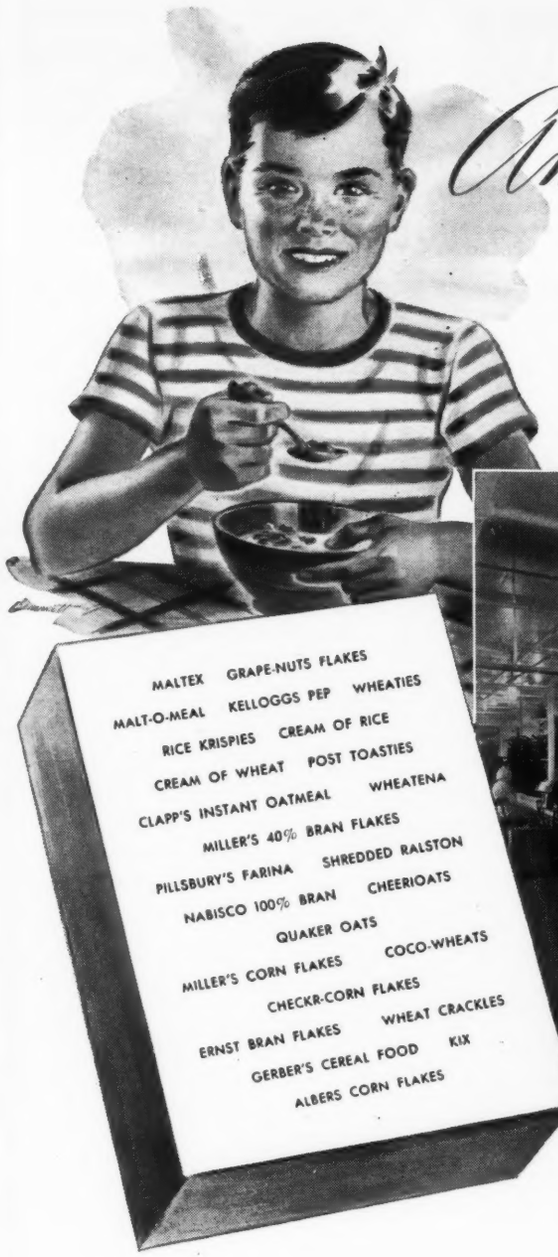
Effective Jan. 15, the **Trade Mark Bureau** of the **United States Printing & Lithograph Co.** increased the charge for trademark investigation service to $5 per brand name investigated. Approximately 500,000 registered trademarks are filed and over twice as many common law usages. The latter is the only file of its kind in existence. The bureau emphasizes that its service is informational only and does not claim infallibility.

Hampden Glazed Paper & Card Co., Holyoke, Mass., has recently issued its 1947 catalog, obtainable by writing the firm.

The American Society for Testing Materials has issued two reprints recently. "The Theoretical Basis of Adhesion," by **W. A. Weyle** of **Pennsylvania State College,** presented at a recent meeting of committee D-14 on adhesives held in Buffalo can be obtained for 50 cents per copy. "Symposium on Adhesives," containing seven technical papers and sponsored by committee **D-14** on adhesives, can be procured for $1.

A source of information on time switching mechanisms may be found in **Bulletin T-55** issued by **Automatic Temperature Control, Inc.** Copies of the pamphlet may be obtained from the company at 34 E. Logan St., Philadelphia.

Mason Box Co.'s parcel post rate and zone chart has been revised and brought up to date. Issued to customers without charge, it is available to the general public for 75 cents, at Dept. 56, **Mason Box Co.,** Attleboro Falls, Mass.



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You can take the word of America's leading cereal houses—Pneumatic machines mean packaging economy. It is something more than mere chance that most of the largest producers in the cereal field rely in large part on Pneumatic equipment.

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PACKAGING AND BOTTLING MACHINERY

Over eighty different machines for the packaging of dry, free-flowing products and the cleaning, filling, capping and labeling of containers for liquids and semi-liquids

U.S. Patents Digest

Edited by H. A. Levey

This digest includes each month the more important patents which are of interest to those who are concerned with packaging materials. Copies of patents are available from the U. S. Patent Office, Washington, at 25 cents each in currency, money order or certified check; postage stamps are not accepted.

Dispensing Device, P. A. Wooster, San Rafael, Calif. U. S. 2,411,917, Dec. 3. Operating mechanism for a towel dispenser comprising a dispensing roller, a crank, a worm and gear drive connecting said crank and roller and a unidirectional friction clutch between said crank and worm to prevent reverse rotation of the worm.

Combined Toothbrush Holder and Tooth Paste Dispenser, J. C. Kotraba, Chicago, Ill. U. S. 2,411,923, Dec. 3. A device including a chambered body having a paste storage chamber, a paste dispensing chamber communicating with the storage chamber and a discharge port communicating with the dispensing chamber and a holder member carried by said chambered body member, a plurality of brush holders carried by said holder member for supporting brushes thereon.

Container for Cigarette Package or the Like, M. Vogel, Bridgeport, Conn. U. S. 2,411,946, Dec. 3. A container for a cigarette package or the like, comprising a receptacle part including a base, spaced parallel front and rear walls extending upwardly from said base, and side walls extending upwardly from said base and connecting said front and rear walls and a cover part comprising a top, and spaced parallel front and rear walls, the front and rear walls of cover being resiliently yieldable, hinge means hingedly connecting said receptable and cover parts comprising stud and pocket means.

Machine for Filling Valve Bags, C. A. Adams (to Tennessee Corp., New York, N. Y.). U. S. 2,412,026, Dec. 3. Apparatus for filling valve bags comprising a filling tube adapted to extend horizontally inward through a valve of a bag for conveying material into the same, a pair of outer members consisting of independent bars mounted and fixed upon the upper surface of said filling tube and extending lengthwise thereof in spaced parallel relation to each other.

Carton for Sealing by Immersion, S. Bergstein (to Robert M. Bergstein and Frank D. Bergstein, trustees). U. S. 2,412,031, Dec. 3. A carton blank having enclosing body walls in articulation and end closure flaps articulated to said body walls, said end closure flaps adapted to be folded in sequence to form a plural layered closure in which the flaps lie in face-to-face engagement and adhesive union, one of said flaps being an outer flap dimensioned to cover the entire end cross-section of said body, another of said closure flaps being an intermediate flap similarly dimensioned to cover the entire end cross-section of said carton body, recesses in said closure adapted to be filled.

Bottle Wadding Machine and Method, T. C. Kelly, Hinsdale, Ill. U. S. 2,412,089, Dec. 3. The method of wadding shouldered bottles which consists in externally confining a wadding charge longitudinally divided at its entering end and in maintaining such confined charge in register with the mouth of a shouldered bottle, so supplied causing divided leading ends of the charge to spread apart and underflow the shoulders of the bottle.

Paper Coating, H. V. Dunham (to The Borden Co., New York, N. Y.). U. S. 2,411,989, Dec. 3. In paper coating, the process which consists first in leaching a high protein content seedmeal with about four to 10 times its own weight of an acid aqueous solution having an acid content equal to about 3.8 to 6 lbs. of hydrochloric acid solution of sp. gr. 1.18 to 1.19 per 100 lbs. of said seedmeal, thereby dissolving and removing the bulk of the carbohydrate gums, without subjecting the seedmeal material to a protein-denaturing treatment, mixing the degummed seedmeal material with an aqueous alkaline liquid of an alkalinity equal to about 1.67% of NaOH, and with a pigmentary material and coating paper.

Web Feeding and Slitting Mechanism, W. F. Huck (to R. Hoe & Co., Inc., New York, N. Y.) U. S. 2,412,047, Dec. 3. In a device for cutting webs into ribbons, a slitter knife rotatable about its axis, an abutment roller rotatable on an axis parallel to the axis of the slitter knife and having a groove positioned to receive the edge of the slitter knife to slit the webs, and equipped with presser member.

Deodorant Can, J. Coyle (to Continental Can Co., Inc., New York, N. Y.). U. S. 2,412,128, Dec. 3. A deodorizing device comprising a cylindrical-shaped can having a cone-shaped upper end defining an opening with a closure member thereon, a seam for uniting the cone-shaped end with the body wall of said can, said can forming a receptable for a deodorizing material, and a vaporizer having an open end detachably connected to said seam, the fumes therefrom being discharged through perforations formed in the vaporizer.

Machine for Electric Welding Can Bodies, R. M. Mero & A. Treff (to Continental Can Co., New York, N. Y.). U. S. 2.412,166, Dec. 3. A welding machine comprising a supporting horn for a formed can body having a side seam including interlocking hooks and lapped portions at the end thereof, cooperating welding electrodes disposed at one side of said horn so as to engage the outer face of the can body in region of lap portion of side seam for spot welding.

Receptacle and Cover Therefor, J. H. Devine & W. T. Halvorsen, Chicago, Ill. U. S. 2,412,325, Dec. 10. In combination, two similar receptacles, and similar covers therefor, each of said receptacles being provided in the under face of its bottom wall with a concentric recess, each of said covers having an outer thickened portion of a size to fit within the upper end of said body and a peripheral flange of reduced thickness disposed to be seated upon the upper end of said body.

Apparatus for Spraying Crown Caps, H. A. Fink (to Continental Can Co., New York, N. Y.). U. S. 2,412,138, Dec. 3. An apparatus for coating crown caps comprising a conveyor on which the caps are placed in a plurality of rows for coating, a spray head associated with said conveyor for coating the exposed faces of the caps said conveyor being of non-magnetic material, a magnetic roller over which the conveyor passes, said roller operating to hold the caps on the conveyor until they pass from the magnetic influence thereof, a second conveyor onto which the caps drop when released from the first conveyor in an inverted position, a spray head associated with the second conveyor for coating the exposed uncoated face of the caps.

Vaporizing Device. C. F. J. Dupuy (to O-Cedar Corp., Chicago, Ill., a corporation of Ill.). U. S. 2,412,326, Dec. 10. A vaporizing device comprising a tubular shell open at its ends and having an inwardly projecting bead adjacent its bottom, a container adapted to hold liquid to be vaporized fitting within the shell, a cap for the container having a bead adapted to rest on the bead of the shell with the major portion of the cap lying below the bead, and a wick in the container adapted to be exposed adjacent the top of the container.

Container, T. Hansen (one-half to Ole Gisvold, Minneapolis, Minn.), Duluth, Minn. U. S. 2,412,332, Dec. 10. A container comprising in combination, substantially oval-shaped ends and an intermediate partition disposed in substantially parallel relationship to one another with their longitudinal axes in a common plane, said intermediate partition being smaller than said ends by a uniform marginal amount and dividing the space between said ends into two sections, and having a flexible and endless belt-like cover encompassing and slidable around said inner covering wall, said belt-like cover extending laterally between the ends and having spaced openings therein to align with the openings in the wall.

Carton Forming Machine, E. S. Tascher (to National Biscuit Co., New York, N. Y.). U. S. 2,412,369, Dec. 10. A machine having a supporting frame, a removable unit assembly comprising a top plate, a cross-plate below the top plate, parallel front guides connecting the top plate and cross-plate, fixed front flap guides perpendicular to the front guides and secured adjacent thereto, with yieldable breaker fingers fixed to the front flap guides and engageable by carton flaps moving along the guides, fixed guide fingers secured adjacent to the outer edges of the front guides below the front flap guides and yield-tongue pressers fixed to the front guides, and means for securing the unit assembly to the frame.

Package Delivery Chute, E. S. Tascher (to National Biscuit Co., New York, N. Y.). U. S. 2,412,368, Dec. 10. The combination of a delivery chute adapted to carry a line of packages and a pivoted inclined extension adjacent the delivery end of the chute having a slide adapted to receive the lowermost package of the line and a stop to hold the next package.

Automatically Locked Fibreboard Shipping Box, J. G. Huye, New Orleans, La. U. S. 2,412,402, Dec. 10. An automatically locked box comprising a body section having a bottom panel and side and end flanges integral with and extending upward from said panel and having their respective

Paisley
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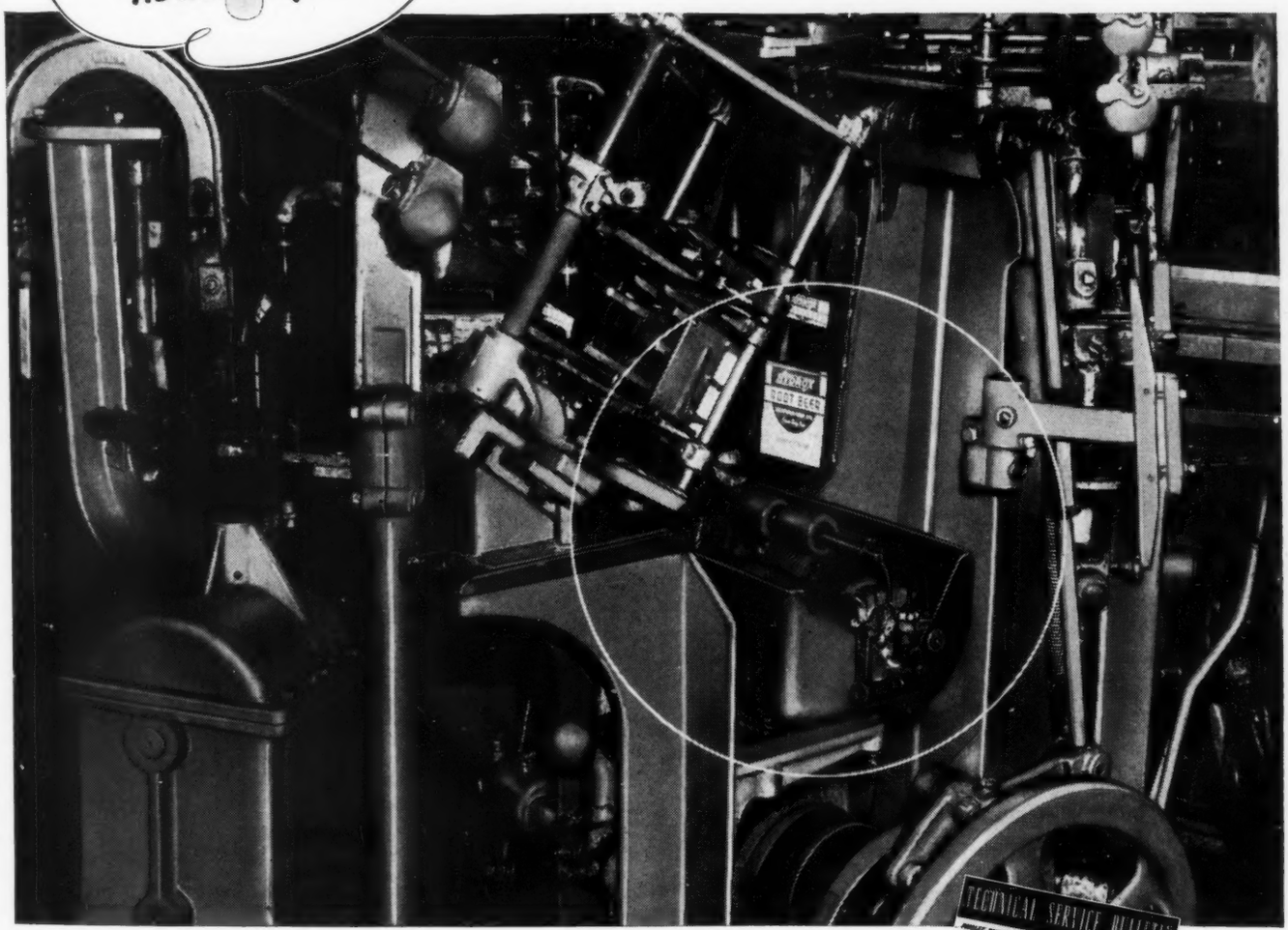
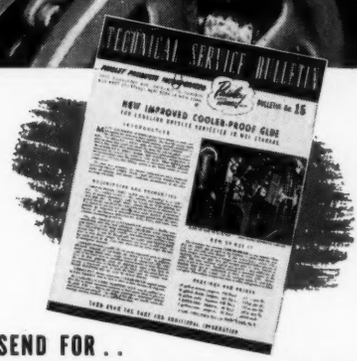
NEW COOLER-PROOF GLUE

HOLDS LABELS *TIGHT* IN WET STORAGE



PACKERS of foods and drinks in glass subjected to refrigerator or wet storage should investigate this remarkable new Cooler-Proof label glue. For, it offers new assurance that labels will reach consumers neat, trim, INTACT . . tightly sealed to glass containers. Fine pre-war materials and war-developed Paisley scientific techniques were combined by our adhesive engineers to produce this better label glue. COOLER-PROOF is a jelly type, flexible, non-crystallizing glue with an unusually high degree of resistance to dampness and water immersion. Operates efficiently at speeds of 120 or more containers a minute. Economical . . a *thin* film gives maximum tackiness to hold labels in place. One glue pot filling usually serves the average labeling machine on a full 8-hour shift. Packed in 1, 5, 10, 30 and 55 gallon containers.



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Get this informative illustrated Bulletin which contains complete data about COOLER-PROOF Label Glue . . description and properties, how to use it, packings and prices, list of uses, and offers a free adhesive consulting service. Write or wire for your copy today!

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end portions firmly secured together to form a rim, and a plurality of locking tongues respectively integrally resiliently hingedly connected to the upper parts of the respective end portions of the respective side flanges and extending laterally therefrom.

Holder for Labels, Tags and the Like, W. Kahn, Middelburg, Transvaal, Union of South Africa. U. S. 2,412,405, Dec. 10. A combination label device, comprising a front wall and a rear wall defining a pocket space, said rear wall being opaque and shorter than said front wall and being attached to the latter along each side and the bottom end thereof but not along the top end, whereby a split opening into said pocket space is provided, said rear wall being provided with a short slit inwardly from its aforesaid top end, said short slit being engageable by said tabbed end.

Carton Forming and Filling Machine, E. S. Tascher & W. Bazant (to National Biscuit Co., New York, N. Y.). U. S. 2,412,370, Dec. 10. The combination of an endless conveyor, means for driving the conveyor continuously, and means for supplying stacked articles to the receiving end of said upper run and delivering them at the other end and plunger means operated to deliver articles to the hollow former.

Display Box, R. E. Fink (to National Folding Box Co., New Haven, Conn.). U. S. 2,412,450, Dec. 10. A container for the display of merchandise, said container being formed wholly of integral, yieldable sheet material and comprising a container proper having an open side; a closure panel for such open side hingedly connected to an edge of a certain panel of the container proper, said closure panel having a dimension parallel to the direction of its stated hinge; said display panel is frictionally held in display position at the stage when the container as an entirety rests upon its said closure panel.

Bag Manufacturer, C. E. Gardner (to Wingfoot Corp., Akron, Ohio, a corporation of Del.). U. S. 2,412,501, Dec. 10. The method of forming a square-bottom bag which comprises flattening a section of a tube of multiple-wall bag material to form plicated sides and a front and back wall, the inner ply being composed of heat-sealable material.

Spirally Wound Barrel Closure, Delos G. Giles, Oil City, Pa. U. S. 2,412,576, Dec. 17. A barrel head or the like comprising a paper strip of substantially continuously varying width wound spirally in convolutions, successive convolutions being unitarily adherent to each other and the resulting closure having a central opening adjacent to which said strip has its maximum width, said closure tapering progressively to a minimum section adjacent its periphery.

Liquid Dispensing Apparatus, G. J. Harman (Harman Equipment Co., a corporation of Cal.). U. S. 2,412,577, Dec. 17. In combination: a barrel; a support for said barrel movable to occupy a loading position and a carrying position; an outlet nozzle on said barrel having a first valve therein normally closed; means for urging said valve to closed position; a suction manifold having an inlet spout formed with a seat to receive said nozzle when said support is moved to barrel carrying position; means for sealing the joint between said nozzle and spout seat.

Capsule Filling Device, R. W. Smith (to Flint Machinery Co., Flint, Mich.). U. S. 2,412,637, Dec. 17. In a capsule-filling machine a cylindrical capsule body carrier provided with longitudinal rows of radial holes about its periphery, said holes being adapted to receive capsule bodies, a plurality of arcuate plates slidably mounted for axial movement on the periphery of said carrier, said arcuate plates having longitudinal rows or radial holes adapted to be aligned with the holes in said carrier and receive capsule caps.

Liquidproof Fibreboard Carton with Bellows Closure, J. A. Zinn, Jr., Belmont, Mass. U. S. 2,412,666, Dec. 17. A sealed top carton, formed from a single blank, said carton having a rectangular tapered body portion and a squared-up upper closure portion, comprising tapered body portions formed of panels shaped to taper downwardly, two opposed body panels being provided with integrally connected upper closing flaps separated therefrom by a scored hinge, the vertical side edges of said hinged upper closing flaps being defined by parallel scored lines making angles of 90 deg. with scored hinges.

Coated Metal Container, J. C. Morrell, Oak Park, Ill. U. S. 2,412,528, Dec. 10. A container comprising a body, a top and a bottom of sheet metal and at least the interior of which is coated with a relatively flexible prime coating comprising a polymerized hydrocarbon and a relatively rigid top coating comprising a thermoplastic synthetic resin.

Reusable Collapsible Liquid Carrying and Dispensing Container, H. F. Waters, New York, N. Y. U. S. 2,412,544, Dec. 10. A flat-folded erectable lined carton, erectable into squared-up, use position, said liner comprising a flat, preformed, pre-sealed, liquid-proof bag, said carton comprising front and back wall panels, a foldable bottom panel, joining the wall panels.

Crushproof Reinforced Paperboard Package with Liquid-Tight Liner and Method of Making Same, H. F. Waters, New York, N. Y. U. S. 2,412,547, Dec. 10. A composite laminated sheet for forming flat-folded packages, comprising a paperboard carton blank having longitudinal and transverse score lines defining a pair of front and back main panels with a connecting bottom panel, a pair of side panels and top bottom closure flaps, a liner sheet over the carton blank and substantially coextensive therewith, the said liner being secured to the carton blank at the several panels only and free of attachment at the corners of the panels.

Package and Closure, W. P. White (to White Cap Co., Chicago, Ill.). U. S. 2,412,794, Dec. 17. A vacuum-seal package comprising a receptacle having an annular wall portion with an annular mouth rim and an annular peripheral bead encompassing the mouth rim and projecting outwardly from said wall portion and a closure adapted for retention on the receptable by atmospheric pressure alone, said closure comprising a shell having a top portion for covering the receptacle mouth and a depending annular skirt.

Multi-sided Shipping Container with Automatically Locking Slip Cover, S. A. Blackman (to Gaylord Container Corp., St. Louis, Mo.) U. S. 2,412,798, Dec. 17. A carton comprising a body having a bottom panel with a plurality of upstanding side marginal flaps forming a multi-sided wall, alternate flaps having outstanding side tabs that overlap and are secured flatwise to the inside faces of the flaps therebetween, all of said flaps having downturned exterior locking flaps at the upper ends thereof, the locking flaps of the wall flaps between said alternate wall flaps being rigidly fixed flatwise to the outside faces thereof and the locking flaps of said alternate wall flaps being left free, and a slip cover for said body comprising a top panel having a plurality of depending side marginal flaps forming a multi-sided rim for said cover.

Bottle Closure Device, M. Prager, Irvington, N. J. U. S. 2,412,833, Dec. 17. In combination with a large bottle having a threaded neck and a small bottle having a threaded neck and a shouldered portion adjacent its threaded neck, a dispensing cap comprising an elongated body member open at its lower end and formed with internal threads at its lower end in threaded engagement with the threaded neck of the large bottle.

Means and Method for Hermetic Bag and Tube Closures, S. Bergstein (to Robert M. Bergstein and Frank D. Bergstein, trustees), Cincinnati, Ohio. U. S. 2,412,862, Dec. 17. A method of hermetically sealing the end of a flexible tubular bag or liner which comprises pressing together opposite walls thereof whereby to hold them against each other along a line spaced from the end of the liner, opening up the liner end so as to separate the said walls beyond the line of pressure and introducing a sealing medium into said open end in a continuous body to form a plastic, ribbon-like mass to effect a seal above the line at which said walls are held together.

Apparatus for Sealing Containers, H. E. Stover (to Anchor Hocking Glass Corp., Lancaster, Ohio). U. S. 2,412,924, Dec. 17. Apparatus for sealing containers, comprising a support for a container, a sealing member associated with said support, a fluid-actuated unit for moving said sealing member, a valve for controlling the supply of fluid to said fluid-actuated unit and second valve controlling the operation of said last-named valve.

Coating Device, V. F. Zdancewicz, Lynn, Mass. U. S. 2,412,954, Dec. 24. An apparatus for applying fluorescent coating to the wall of open-ended envelopes for gaseous discharge devices.

Lipstick Holder, A. S. Mackey (to Scovill Mfg. Co., Waterbury, Conn.). U. S. 2,412,999, Dec. 24. A lipstick holder comprising an elongated tubular body having a one dimensional bore throughout the major portion of the length thereof, a holding member within the bore of the body, means at one end portion of the member for supporting a lipstick therein.

Control Device, J. H. Murch (to American Can Co., New York, N. Y.). U. S. 2,413,031, Dec. 24. In a container body forming machine, the combination of a horn, a movable finger for bending a portion of a container body blank on said horn, an actuating member for moving said finger, a driving member resiliently connected with said actuating member for operating it, said driving member being resiliently movable relative to said actuating member only when a body on said horn becomes jammed.

Film-Forming Resinous Lining for Metal Containers, A. H. Warth and I. F. Bulatkin (to Crown Cork & Seal Co., Inc., Baltimore, Md.). U. S. 2,413,093, Dec. 24. A metal container having a lining in the form of a thin, continuous film comprising a major portion of film-forming resinous varnish having Aruba resin incorporated therein.

Seal the Sale with CEL-O-SEAL

There's EVERY reason to choose glass-packed coffee when it's protected by "CEL-O-SEAL" bands

A sparkling glass package gives coffee added eye-appeal . . . provides a convenient container in the pantry that shows at a glance if it's time to buy more. And when the screw-top closure is sealed with "Cel-O-Seal"—so that shoppers see there's no chance for "accidents" to destroy the vacuum-pack—it's the package that rates a preference from every angle.

That's why Schonbrunn, in considering the shopper-appeal of its glass package, added a Du Pont "Cel-O-Seal" cellulose band. Put yourself in the shopper's place—you'll agree that these colorful bands—which can be indelibly printed with your trademark or sales message—stand out as a mark of extra protection that sells the shopper . . . and seals the sale!

E. I. du Pont de Nemours & Co. (Inc.), Wilmington, Delaware.

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BETTER THINGS FOR BETTER LIVING
. . . THROUGH CHEMISTRY

DU PONT
"CEL-O-SEAL" BANDS

Contoured

(*Continued from page 103*) principles of this forming process have been evolved over a period of years, it has been only during the past few months that plastic sheet materials which will permit fine clarity in the formed pieces and consistent, accurate production have become available in sufficient quantity. Foreign as well as American interest in this type of package has been considerable and it is announced that production set-ups will soon be in operation in Europe, South America and Asia.

High-speed production makes the package applicable even to low-cost products, where the novelty of a transparent plastic package may be a big sales incentive. An example is "Breath Caps," a liquid-filled confection now selling for 25 cents a package on cigar counters. Fifteen of the ball-like "capsules" are packaged in a formed groove in the lower half of the container which is like the race of a ball bearing. The drawn top fits snugly over.

Two pieces of acetate sheet are drawn to form package for an item selling at low cost. Capsules are green; lettering on lid telling how to open the container is in red. Inner circular paper label completes package. Folding box makes a display piece for a dozen packages.

The formed sheet plastic package may be regarded by the designer as a new field of exploitation with unique merchandising potentialities. Although this type of package naturally has certain limitations in design, depth of draw and production speeds, it offers a hitherto unexplored field which will undoubtedly witness important packaging developments during the next few years.

CREDITS: *Plastic sheet forming process licensed by Borkland Laboratories, Marion, Ind. Manufacturers of packages illustrated: Nos. 1 and 10, Weinman Bros., Chicago; 2, Lactona, Inc., St. Paul, Minn.; 3, Superior Plastic Mold Co., Aurora, Ill.; 4, Somerville, Ltd., London, Ont.; 5, Plastic Manufacturers & Designers Corp., Indianapolis; 6, 7, 8 and 9, Borkland Laboratories. "Breath Caps" container fabricated by Plastifab, Inc., Chicago; display carton by Acme Paper Box Co., Chicago.*

A FRANK STATEMENT

OF WHY AMERICAN CAN COMPANY MUST ALLOCATE METAL CONTAINERS

★

Steel for plate making still in short supply. As Government relaxes control on uses of steel, Canco must allocate its output to protect you.

★

WHEN THE Government removed its restrictions on steel for plate making, it became necessary for American Can Company to step in and set up its own system of allocation . . .

. . . despite the fact that Canco has adequate production facilities.

Now, why was this move necessary?

It's a matter of steel. Steel for making plate. The steel plate from which all types of cans and containers and other metal packages are made.

For all types of steel are still in short supply! There just isn't enough of it to fill *all* the needs of *everybody*.

So, it seemed to us that the only fair thing to do was to see to it that every one of our customers got his just and proper share of steel plate . . . the little fellow . . . the big fellow . . . and all those users of steel plate in between . . . all on the same basis.

And until this situation eases, we are continuing our policy of accepting no new business. Your Canco salesman is prepared to explain to you our 1947 allocation plan . . . how it applies to you. And how it protects you. We invite you to discuss this matter with him.

AMERICAN CAN COMPANY

CANCO

NEW YORK ★ CHICAGO ★ SAN FRANCISCO

Moisture equilibrium

(*Continued from page 138*) serves to indicate the manner in which this method may be utilized to obtain complete sorption isotherms in a minimum of elapsed time. In the interest of expediency the above procedure is preferred if an adequate supply of the sample is available. If the sample is inadequate for obtaining the required sorption data simultaneously, the procedure is modified somewhat and an individual specimen is successively exposed to the various relative humidities until a sufficient number of points has been obtained to define the curve.

In determining the sorption characteristics of some materials it is occasionally of interest to start the sorption tests at a relative humidity that is not very different from the equilibrium relative humidity of the material at the point of manufacture or as supplied to the laboratory. When such an occasion arises, as it does for example in the testing of foods, this apparatus can be used as an indirect means for determining the equilibrium relative humidity of the product. Several specimens of the product to be tested are placed in Petri dishes and, in turn, over crystallizing dishes containing different saturated salt solutions having relative humidities in the range in which it is believed the equilibrium relative humidity of the product will fall. If the specimen is exposed to a relative humidity which is the same as the equilibrium relative humidity of the product, no change in the weight of the specimen will be observed. However, if the relative humidity in the dish is different from the initial equilibrium relative humidity of the product, a change in the weight of the specimen will be observed. An increase in the weight of the specimen indicates that the initial equilibrium relative humidity of the product was lower than the known relative humidity over the saturated salt solution and, conversely, a decrease in the weight of the specimen indicates that the equilibrium relative humidity of the product was higher than the known equilibrium relative humidity of the saturated salt solution. For products which have equilibrium relative humidities ranging from about 15 to 30%, a range for which there are only a few saturated salt solutions, it may be desirable to use sulphuric acid solutions (4). The concentration of the acid can be adjusted to give any desired relative humidity.

Absorption isotherms for two resin films are presented in Fig. 4. It should be noted that on this chart the weight of the film instead of its moisture content is plotted as a function of the relative humidity. The moisture content of the films was not of interest. The desired information on the films was obtained by merely determining the weight of a known area of the film as a function of the relative humidity. The curve designated *a* is for an untreated resinous film, whereas that designated *b* is for a film containing a very slight trace of an inorganic salt.

To obtain the data presented in Fig. 5, the units were

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Each one conforms to the rigidly high standards of strength and uniformity that have built our reputation as a *specialist* in the small plastic field.

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PLASTICS DIVISION

OWENS-ILLINOIS GLASS COMPANY

TOLEDO 1, OHIO • BRANCHES IN PRINCIPAL CITIES

employed to determine the rate at which moisture was absorbed on treated and untreated fibres. The curve designated *a* is for the untreated fibre and that designated *b* is for the treated fibre. In carrying out the test the fibres were initially conditioned at a low relative humidity, that obtained with phosphorus pentoxide in the crystallizing dishes. When constant weights were obtained, the specimens were subsequently placed over crystallizing dishes containing a saturated solution of ammonium dihydrogen phosphate having an equilibrium relative humidity of 92%. As indicated by the curves, the untreated fibres reached a constant weight in approximately 30 hours, whereas the treated fibres were still gaining weight at approximately 200 hours.

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2. Wink, *Ind. Eng. Chem., Anal. Ed.*, *18*, 251 (1946).
3. American Paper and Pulp Assn., *Report 40* (Feb. 15, 1945).
4. Wilson, *J. Ind. Eng. Chem.*, *13*, 326 (1921).

Frozen foods

(*Continued from page 115*) of its simplicity and effectiveness, this method of protection should be of interest to both the commercial packer and the frozen food locker patron. It is especially advantageous in the protective packaging of cuts of frozen meat or poultry since the coating automatically adapts itself to the shape of the frozen part. Coatings having the proper physical characteristics are easily removed or "peeled off" after exposure of the frozen commodity to room temperature for a sufficient time to develop a film of water between the coating and the frozen food.

As a variation of this procedure, the material after freezing may be packed tightly in cartons or bags and then dipped in the thermoplastic coating. Experiments have shown that this method of handling is in some ways superior to direct dipping because the carton or bag allows for expansion and permits the use of less flexible coating materials. The methods of application are numerous and are limited only by the ingenuity of the operator.

A glance ahead

Although the requirements for adequate protection of packaged frozen foods are now widely recognized by the industry, much investigational work remains to be done on the behavior of packaging materials and packages at low temperatures. Ultimately the establishment of packaging specifications would appear to be a desirable step. At all events, since the retention of quality and food values of frozen foods during handling and storage is dependent upon efficient protection against dehydration and oxidation, the problem is of immediate importance to growers, processors and consumers of food.

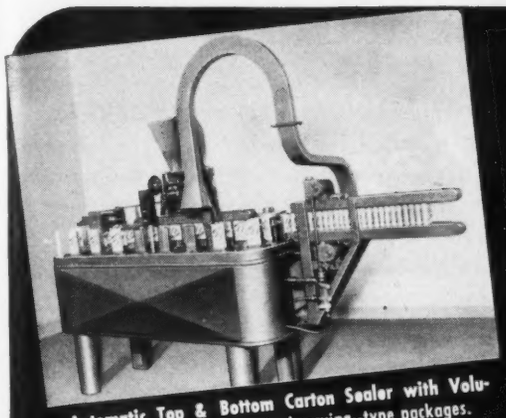
It is possible that the future of the frozen food industry will in considerable degree be affected by the progress of packaging. Not only distinctive but also suitably protective packaging must be an objective of the industry if the pace of progress is to be maintained.

OUNCES TO POUNDS...

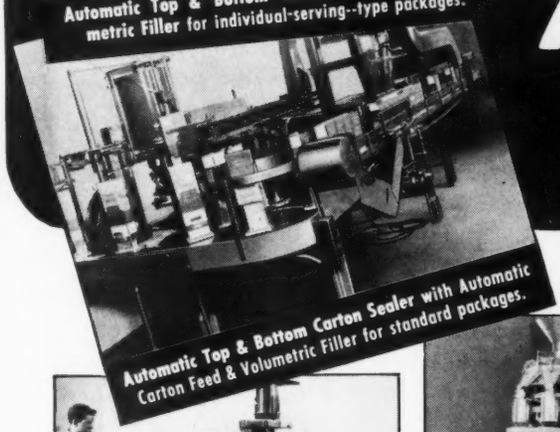
CARTONS or CASES

PACKOMATIC

FILLS, WEIGHS, SEALS AUTOMATICALLY

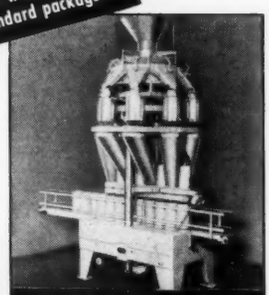


Automatic Top & Bottom Carton Sealer with Volumetric Filler for individual-serving--type packages.

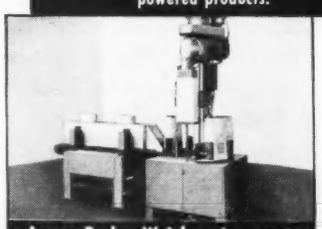


Automatic Top & Bottom Carton Sealer with Automatic Carton Feed & Volumetric Filler for standard packages.

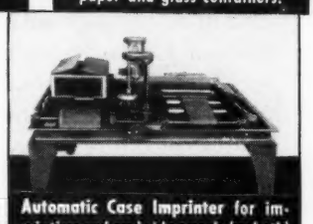
Automatic Telescoping Volumetric Filler for packaging semi- and free-flowing dry powered products.



Net Weight Scale for filling round and rectangular metal, paper and glass containers.



Auger Packer-Weigher for semi- and non-free flowing products.



Automatic Case Imprinter for imprinting end and side panels (or both) of paper shipping cases.

You get a wide range of package forming, filling, weighing and sealing equipment from PACKOMATIC—a wealth of package and shipping case handling know-how to save you time, labor, money.

If you have a packaging program up or contemplated, ask for PACKOMATIC'S recommendations before you commit yourself.

Package filling equipment for units from ounce to pound weights—shipping case glueing and sealing equipment in a wide range of case sizes—there is a PACKOMATIC to help you speed your wares to market. For more than a quarter of a century, PACKOMATIC has been working with America's top flight enterprises, and today some of the nation's best known product identities are being efficiently and economically handled by PACKOMATIC equipment.

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Serial Numbering Device for Model D Case Glueer.

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Foreign markets

(*Continued from page 92*) tions is the essential function of the package planned for foreign markets. Excessive moisture, dryness, high or low temperatures may be the difficulties. Many firms devise special package protection against such detrimental factors. For years Standard Brands had shipped Fleischmann's yeast to many parts of the world—a perishable product that had to be kept under refrigeration. During the war, the company developed a dry yeast which can be packaged automatically in moisture-resistant thermoplastic coated-glassine envelopes (see MODERN PACKAGING, Nov., 1946, p. 95) and requires no refrigeration.

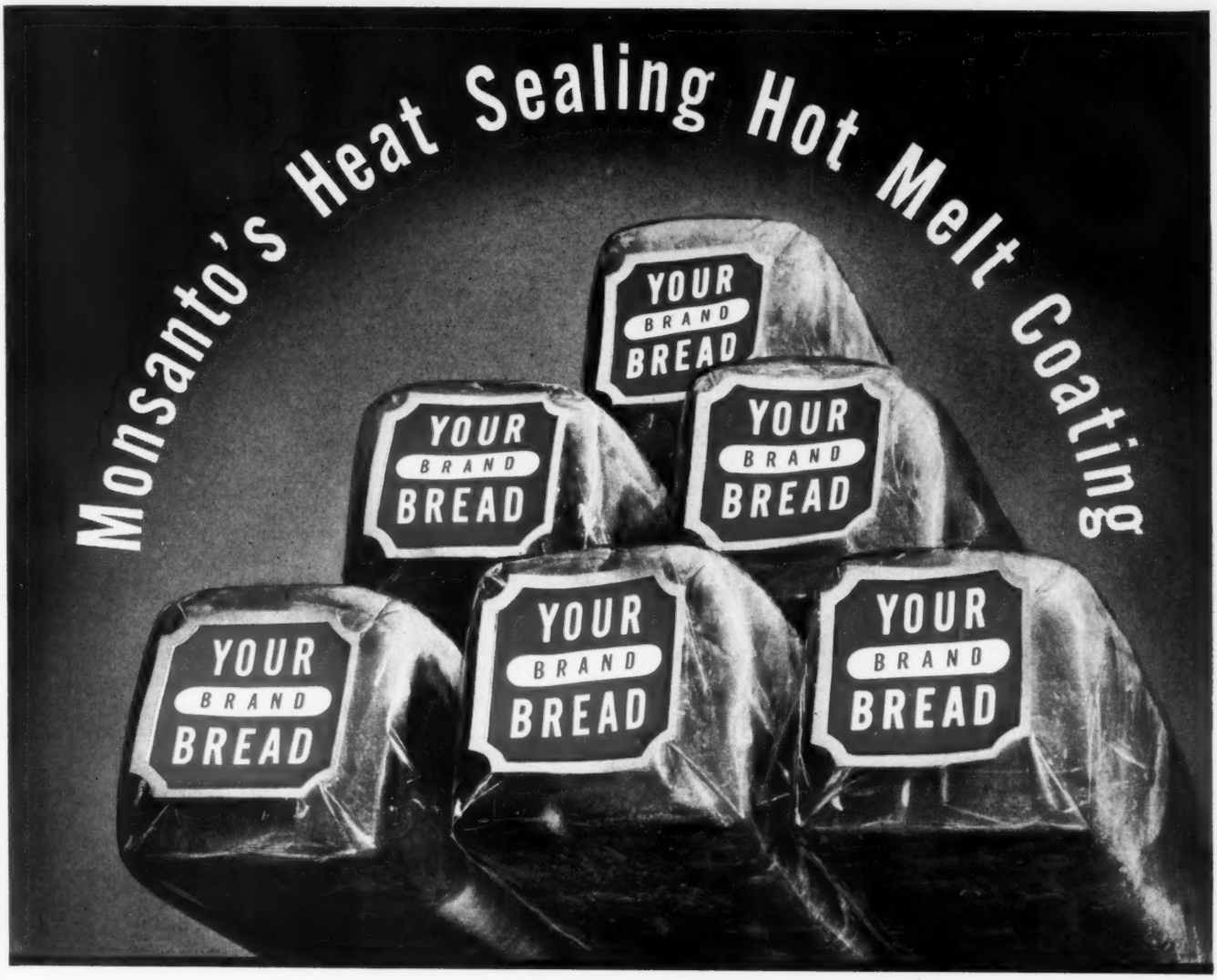
During the war Standard Brands designed an overseas package for its Royal gelatin products. The product was packed without sugar in glassine envelopes, thus cutting down the bulk and saving critical shipping space. Royal gelatin desserts, however, have now returned to their familiar carton package for export with a duplex waxed glassine liner.

General Foods Instant Postum is an international product with practically no competitors. The product is very hygroscopic and requires an airtight package to prevent caking. A metal container is the solution but the metal container must have an airtight seal. During the war this was a troublesome problem because there was no aluminum for the inner seal. Now General Foods is back to the aluminum inner seal.

Insect infestation is a serious problem in export and every packager for foreign markets is interested in a package that will prevent such attack on his product. Cereals and flour are particularly susceptible. A metal-end fibre canister with a laminated glassine liner and friction top has been used by General Foods successfully for Grape-Nuts sold in India and the Panama Canal Zone. This container is also an excellent barrier against moisture in tropical countries.

Export shippers of fresh fruits and vegetables are looking for improved methods of packing such products. They are most open-minded toward developments in pre-packaged produce and would be for it wholeheartedly if it would keep produce fresh for longer periods and retard the ripening of fruits. The serious obstacle however is cost, both of such packaging materials and any packing such as trays which add to bulk.

Cargo in ships goes by cubic space or bulk. Anything that adds to bulk adds considerably to the price of the produce to the foreign importer and consumer. The cost of a cubic foot of space in a ship to Colombia, for example, is $1.05. In one cubic foot of space you can get perhaps 15 heads of lettuce (unpackaged)—60 heads to a crate. This would cost $4.20 to send to Colombia, or about 7 cents a head just for ocean shipping exclusive of all the other costs—grower's price, shipping costs to port in the States, exporter's commission, importer's commission, shipping cost in foreign country, etc. Lettuce raised in the States is a delicacy in Colombia, more crisp than varieties that can be



for End Labels

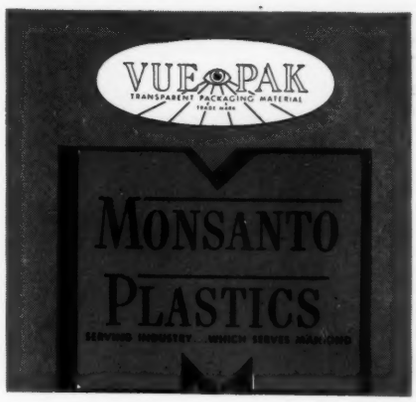
Whatever your product, your label *should* do a big job. And you can be sure that it *does* that job right when it is coated with Monsanto's heat sealing hot melt coating.

For example, on the end labels for specialty breads, Monsanto's heat sealing hot melt coating does an especially important job:

1. Ends of the wrapper effectively sealed
2. A clean, quick labeling operation
3. Labels positioned for most effective display
4. Eliminates expensive and unsatisfactory inserts, bands and glued labels
5. Provides a method for quick label changes, making coding and dating simple
6. An opportunity for a colorful, salesmaking message

You can get these same labeling advantages for your product. This special plastic coating will make your label stick to cellophane, waxed paper, glassine, acetate or foil. You can count on maximum labeling efficiency and economy by using labels coated with Monsanto's heat sealing hot melt coating.

Ask your label supplier for complete information, or write direct to: MONSANTO CHEMICAL COMPANY, Plastics Division, Springfield 2, Massachusetts. In Canada, Monsanto Ltd., Montreal, Toronto, Vancouver.



grown in tropical climates, but too high-priced to compete on a large scale with locally grown lettuce. For celery, the pre-packed future is a little brighter because celery cannot be grown so well in the warmer climates of Latin America. Test shipments of pre-packaged celery in vegetable parchment are said to have indicated that the wrapper reduced spoilage considerably.

Most important produce items shipped out of this country to Latin America are potatoes, apples, grapes and plums. Shipping of potatoes in bags or barrels presents no serious problem. Most satisfactory method of packing grapes is in kegs and chests with sawdust. Plums are shipped in baskets, sometimes cellophane overwrapped, which protects and makes them easier to handle. There is considerable interest in cell-type containers for shipping apples to prevent bruising, but here again consideration must be given to bulk.

Some pre-packaged meats such as frankfurters, sausages, bacon, etc., are shipped out of this country packaged in cellophane-wrapped trays or in glass and cans. These find some markets outside the States, but freight rates make them high priced.

Packaging for the foreign market requires a complete knowledge of countries, peoples, resources, climatic conditions, transportation facilities and local competition to the products to be exported. Packages should be tested in these markets the same as packages are tested for domestic markets. The first source of information, of course, is the importer or the local branch offices of your company. Leaders in the export field believe there are many new markets for American packages for the firm which surveys its market carefully. Before the war export gave employment to 7 or 8% of the workers in American industry. By doing an intelligent job now in the foreign field, some sources believe export can raise this percentage of employment to 10 or even 15%.

Wire supply for boxes

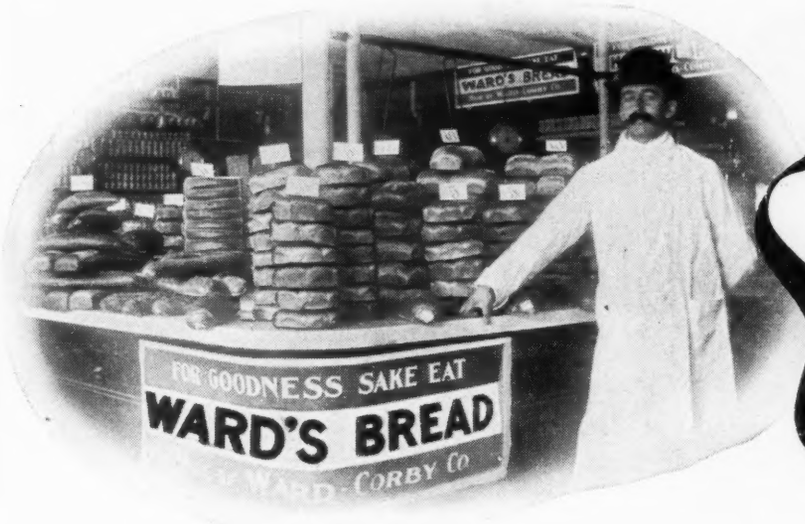
Members of the Wirebound Box Manufacturers Assn. predict that wire will probably continue for several months to be a bottleneck in wirebound box production while lumber and veneer will become more plentiful.

The wire shortage, the box makers claim, is attributable to production curtailments necessitated by coal and steel strikes, the immediate huge demand for nails for construction, abandonment of wire manufacturing by some companies old in the field and to increased demands for all types of wire. One member of the industry believed that the nail shortage will be overcome in a few months and, barring further strikes, the wire situation should ease considerably by mid-1947.

Thus far, box manufacturers have been able to continue operations with only few minor interruptions by intra-industry borrowing of wire.

SUCCESS STORIES OF AMERICAN BUSINESS

WARD BAKING COMPANY



AT THE *Turn* OF THE CENTURY

BAKERIES first became "snow-white temples of cleanliness" when the Ward Baking Company built a radically different, modern bakery in Pittsburgh. That was 1903, the beginning of a long string of "firsts" for Ward. First, in 1908, to install a successful traveling oven in the United States . . . First in 1911, to abandon horse delivery . . . First, also in 1911, to make bread untouched by human hands from flour to dealer's counter . . . First to wrap bread on a large scale, and carry the cycle of protection from flour to home.

These are but a few of Ward's many "firsts". . . another example of the way in which American initiative and industry has brought the best there is to every American citizens' door.

WARD'S TIP-TOP BREAD

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AMA conference plans

In recognition of the return to a buyers' market, the program for the American Management Assn.'s Packaging Conference, to be held in conjunction with the Packaging Exposition in Philadelphia April 8 to 11, will give major emphasis to cost and sales factors.

Conference sessions, which will be held along with the Exposition in Philadelphia's Convention Hall, are planned for the first three days. The detailed program will be announced later. Subjects selected by the Program Planning Council include:

Appeal to the consumer through service, convenience design and reduction in distribution costs.

Correlation of observed experience with results of laboratory tests of packages for moisture protection, water-vapor transfer, oxidation and other characteristics.

Standardization of pallets.

Materials handling as a factor in design.

Methods of packaging air cargo shipment.

Problems of the carrier and receiver.

Special question-and-answer sessions will be held on the effects of merchandising practices on design and construction and, conversely, on the effects of design and construction on merchandising.

The Packaging Exposition itself, which will run through the full four days on the main floor of the Convention Hall, will be bigger and more complete than any of its 16 predecessors. The Exposition management points out that although space for exhibits was increased 100% for last year's show at Atlantic City, this year's space was increased 50% over last year and capacity has already been reached. There are now 145 exhibitors listed and some 40 more on the waiting list for whom there is little hope of finding space.

With this show of interest, it is expected that attendance also will be well above last year's record figure. The AMA suggests this method of getting hotel rooms: Write directly to the hotel at which you prefer to stop for reservations. If it is unable to meet your requirements, the hotel will automatically turn your request over to the AMA Housing Bureau, which will then locate for you comparable accommodations at another hotel and advise you. All Philadelphia hotels have agreed to cooperate on this plan. As long as your letter makes it clear that you will be attending the AMA Packaging Conference and Exposition, your needs will be taken care of one way or the other.

The Convention Hall is a short taxi ride from any of the leading Philadelphia hotels. The AMA management is attempting to set up a special bus system as well. Tentative plans also have been made for a special train to operate to and from the Middle West and a definite announcement on this will be made later.

The Hotel Warwick has been designated as headquarters for members of the Packaging Machinery Manufacturers Institute, which will hold its semi-annual meeting and dinner there on April 7.

Getting Rid of a Seam Solved This Glassmaking Problem

An Armstrong customer with a passion for perfection recently came to us with a question. "Can you do anything about eliminating the seam from the finish of a side-seal vacuum pack jar?" he wanted to know.

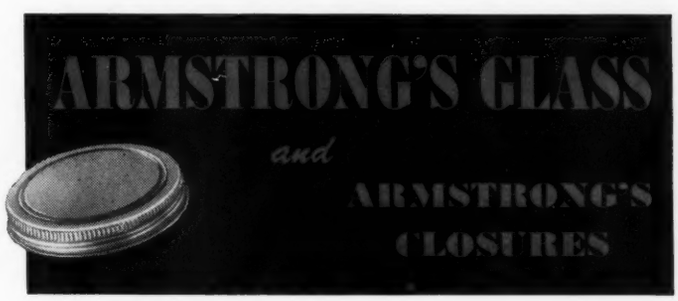
This raised a tough problem because these jars, like most conventional ware, had always been blown in a split mold. Despite the greatest care and skill in mold-making and glass blowing, no manufacturer had been able to prevent the formation of a tiny seam on each side of the finish where the two molds came together.

The loss in sealing vacuum caused by these seams was extremely small—under 1%. But as our customer wanted us to eliminate this slight seam, we called in our engineers, our designers, our mold-makers, our machine tenders and set to work.

The solution we eventually found looked so simple as to be obvious. We eliminated the seam by blowing the finish in a continuous, one-piece neck ring mold.

Finding the solution was actually the easiest part of the job. The mold had to be designed, then made. The glass-blowing machines had to be re-engineered, since we were making the bottle with a three-part mold, instead of two. Tenders had to be trained and many bottles rigorously tested to make sure they measured up to standard. Only because we had available many experienced men possessing a variety of specialized skills were we able eventually to achieve quantity production on this new, seamless finish bottle.

This same great reservoir of skills and experience, including engineers, package designers, chemists, physicists, carton engineers, and dozens of other highly trained specialists, is available to help you with your glass packaging problems. For quick assistance, or information about any of Armstrong's glass or closures, get in touch with your Armstrong representative, or write direct to Armstrong Cork Company, Glass and Closure Division, 6502 Prince Street, Lancaster, Pennsylvania.



Questions and answers

(*Continued from page 146*) and parchment are known to have a high degree of resistance to penetration by organic vapors, depending upon the particular vapor, in general, the permeability being higher towards water and alcohol-soluble vapors and lower towards more complex, large molecular weight or water-insoluble type vapors.

Also, many lacquers and coatings have some resistance to penetration by organic vapors, but since the number of coating types and formulations is so great, each one must be evaluated against the particular flavor or organic vapors to which it is to be exposed, as there is no available data or means of predicting such performance. There have been many cases, however, where the proper selection of lacquers and coatings have proved to be an effective and low-cost means of holding flavors.

However, while the choice of the package material is important since no package can be any better than the material of which it is made, it is equally important that the package be made in such a way that there are no mechanical openings. Otherwise, the effectiveness of the material is lost.

The best answer to you is to try out a large number of different packaging materials and package constructions to see if they are effective in holding the products you wish to package.

Shelf containers

(*Continued from page 96*) to increase the dimensions in length, width and height approximately $^1/_4$ in. each, a minor change.

The one exception was the 60-tablet size of Ironized Yeast. Our previous container was a cube measuring 9 by 9 by $8^1/_4$ in. This shape had caused some difficulty in storing finished stock since the cube-shaped shipping case did not pile well on pallets. It was necessary, therefore, to change the shape of the shipping case. The new dimensions, arrived at after experimentation, are $13^7/_8$ by 12 by $4^1/_4$ in. Six shelf containers fit into this case in one layer three long by two wide.

Of course, we have gone to some expense in studying and adopting these unseen values of packaging. We expect a certain percentage of this cost will be absorbed by the reduction in breakage and damaged merchandise.

But above all we believe that the increase in wholesales and retailer good will which will follow this improvement designed to aid them in handling our merchandise will be well worth all that it cost us.

As we examined our packages seeking opportunities for good will values in our relations with the wholesalers and retailers, we did not overlook our consumers and the ever-important eye-appeal. But that is another story. Suffice it at this time to comment that we found and took the opportunity to clean up the

A versatile line of interesting designs, colors and textures capable of hundreds of ultra smart combinations to lend individuality to your boxes. Shown in Zebra, available—as is all the DECOTONE Style Setter series—in Blue, Green, Pink, Buff, and Gray. It is set off with a cover of contrasting plain color.

Let us help you work out a compelling combination for your boxes.

DECOTONE PRODUCTS

DIVISION

Fitchburg Paper Company

PACKAGING PAPERS *Converted Papers* SPECIALTY PAPERS

FITCHBURG, MASS.

Molle consumer package, both the tube and the jar, and the cartons in which they are enclosed. In the process of cleaning up and beautifying our Molle package we eliminated one color and softened another. Molle for some time has been and will be dressed in packages that combine brown, orange and blue. Within a few months, however, the new package will be appearing in the market. Then it will be noted that the blue has been eliminated. The orange has been graded down to a more pleasant yellow which contrasts pleasantly with brown stripes.

CREDITS: *Suppliers used by the Centaur Co. Division for packages, cartons, shelf containers, counter dispensers and shipping cases include The Great Lakes Box Co., Cleveland; Albany Corrugated Container Corp., Cohoes, N. Y.; Fort Orange Paper Co., Castleton-on-Hudson, N. Y.; Keystone Folding Box Co., Newark, N. J.; Alford Cartons, Ridgefield Park, N. J.; Ivers-Lee Co., Newark, N. J.; International Paper Co., New York, and Continental Can Co., Inc., New York.*

Shipping package show

The second annual Industrial Packaging and Materials Handling Exposition staged by the Industrial Packaging Engineers Assn. of America will be held on April 29 to May 1 at the Hotel Sherman, Chicago. A feature of this year's event will be a protective packaging competition, on which awards will be announced at the annual banquet on April 30.

A. C. McGeath, American Box Board Co., is general chairman of the IPEAA exposition, with A. H. Dobler, Yale & Towne Mfg. Co., serving as vice chairman on materials handling and H. J. Wallace, Guardian Industries, Inc., filling a similar role with relation to the packaging phase of the program.

Among the topics to be covered during the three days of the show in addresses by a number of speakers and in "shirt sleeve" discussion sessions are materials handling, corrosion prevention, protective wrapping, folding and set-up boxes, glass, tin and plastic packaging, corrugated and solid fibre containers, wood containers, steel strapping and general merchandise distribution.

A nationally prominent speaker will deliver the main address at the banquet on April 30. More than 100 commercial exhibits on packaging and materials handling will be shown in conjunction with the Exposition.

Rules of the competition require that entries must be made by individuals rather than companies. Maximum sizes of packages are 6 ft. in dimension and 300 lbs. in weight. Entries may consist of any industrial product wrapped, bundled, strapped, boxed, crated or pallétized. Entries must be in with complete information by April 26. Awards will consist of ribbons and $100 for first prize, $50 for second and $25 for third. Additional information may be obtained from Irving J. Stoller, vice president, Bradner, Smith & Co., Chicago, chairman of the competition.

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To stand out among the countless new products and mass displays of today, your package must not only attract the eye of the passing consumer, not only arouse his or her interest, not only make a better impression of the quality within, but it must have the follow-up punch that transforms shoppers into buyers.

Marvellum's Papers Distinctive do just that. Our skilled designers follow the shoppers' eyes to the colors, designs and finishes that attract them most. The sheer beauty and glamour of each Marvellum paper adds the sales punch that decides the purchase.

Create more sales for your product — more profits for your organization by dressing up your product in a Marvellum Paper Distinctive. We'll be glad to send you sample swatches.

THE MARVELLUM COMPANY

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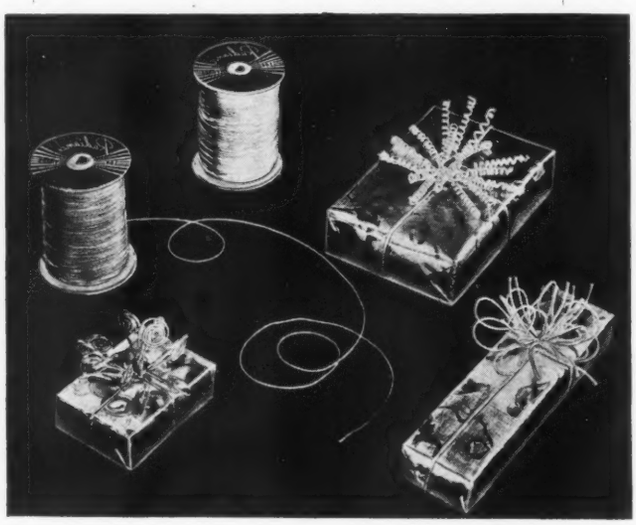
HOLYOKE
MASSACHUSETTS

Equipment & materials

(*Continued from page 148*) labels from the size of a postage stamp up to five inches in diameter on containers from one-quart to one-gallon size at a rate of from 1,200 to 3,000 per hour. The labels—whether they be foil, varnished, lithographed or plain—gummed or ungummed, may be applied, it is said, to bottles, metal cans or paperboard boxes of any shape; no extra attachments are required to handle this wide variety of containers. Hand-fed to the labeler, the containers are automatically conveyed to a conveyor belt by the machine itself.

NEW DECORATIVE CORD

A new metallic, flexible cord, known as Radiance, which simulates snake-chain jewelry, has been developed by Taffel Bros.,



Inc., New York. This durable, tarnishproof tie is available in silver and gold and affords a luxury note to gift packages rather inexpensively, the makers claim.

NEW SINGLE-COLOR OFFSET PRESS

Harris-Seybold Co., Cleveland, Ohio, announces its new LTN 22 by 34 single color offset press, which it reports to be one of the fastest, quietest and smoothest running presses ever made. Supplanting the Model EL in the Harris line, the new LTN is capable of speeds up to 6000 impressions per hour; requires considerably less make-ready and operates with an absolute minimum of mechanical interruptions, according to company claims. Other major improvements over pre-war models include stream feeding, more positive register, controlled ink coverage and convenient servicing. A newly designed inker makes for more efficient ink distribution, while more positive register has been made possible by individual two-sheet calipers installed at each side of the sheet and a new side guide adjustment which can be operated while the press is running. Among other improvements are: installation of micrometer adjustments for the front stops and for the blanket cylinder so that the operator may quickly and easily adjust for thickness of paper and adjustable feeding mechanism for varying sheet sizes.

FEED ATTACHMENT FOR ROTARY SEALER

A new conveyor-feed attachment for its Fast-Tite rotary sealer has been introduced by Pack-Rite Machines, Milwaukee, Wisc. The unit permits any heat-sealable bag or pouch to be fed into the attachment where special springs take hold of the bags and convey them through a built-in preheater unit and sealing rollers—at a speed synchronized with the speed of the rollers. The attachment can be easily installed on any Fast-Tite rotary sealer.

Bags moved on pallets

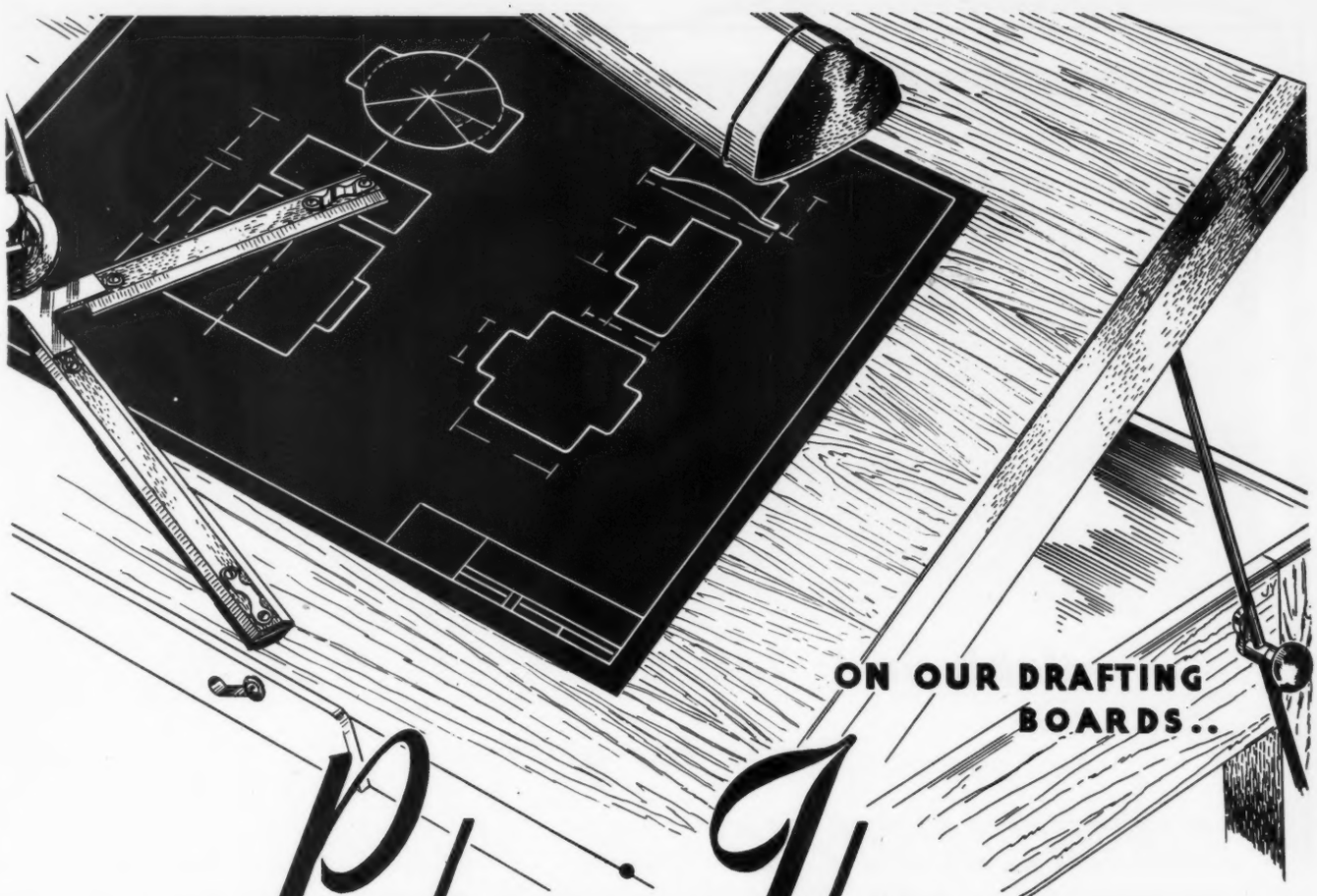
Less-than-carload shipments on railroad-furnished pallets are said to have opened a new field for the application of modern materials handling methods. The adaptability of palletized loading for L.C.L. freight shipments was proved recently when such a shipment over the Great Northern Railroad was made by the Bemis Bro. Bag Co. Said to be the first such freight movement ever completed in this country, two shipments were made from Minneapolis to Minot and Williston, North Dakota.

Wirebound bales of seamless bags comprised the shipments. The bales were strapped to the pallets with six bands of $^3/_4$-in. 0.020 steel strapping. Total weight of the load plus the pallet and strapping was 1,950 lbs. Returnable pallets, furnished by the railway company, were single-faced 40-by-48-in. wood pallets with two outside 4-by-4-in. stringers and a center stringer 2 by 4 in.

One of the bales of seamless bags in the palletized load of less-than-carload freight shipments made by Bemis Bro. Bag Co. on pallets furnished by the railroad. Bale is strapped to pallets with six bands of ¾ in. steel strapping.

Acme Steel Strapping Co. assisted with assembling and strapping the loads. The completed units were tiered by a fork truck for temporary storage. When ready for shipment, the pallets were loaded on a semi trailer by a fork truck and pallet transporter and hauled to the depot by a dray man performing pick-up service for the railroad. The Great Northern unloaded the trailer and loaded the pallets into a merchandise car with a pallet transporter. Shipments were unloaded at the point of destination with the transporter, which had been sent along with the shipments to aid consignees in unloading.

The bales arrived in excellent condition and the consignees have expressed their approval of this type of shipment because of the savings involved.



ON OUR DRAFTING BOARDS..

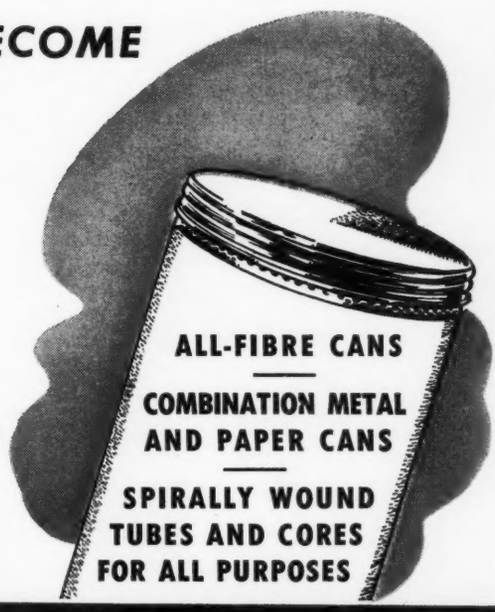
NEW *Packaging Ideas* ARE BORN

. . . BRAIN CHILDREN THAT BECOME THE GIANTS OF TOMORROW

CLEVELAND CONTAINERS CLOTHE hundreds of products for every conceivable purpose.

CLEVELAND CONTAINER has the production capacity to speed-up customer plant operations.

CLEVELAND CONTAINER ENGINEERS are at your command.



INQUIRIES addressed to our CREATIVE DESIGN DEPT. are given specialized attention.

PESTROY, a Product of SHERWIN-WILLIAMS RESEARCH, is packed in Cleveland Container Company's spirally wound cans.

The CLEVELAND CONTAINER Co.
5201 BARBERTON AVENUE CLEVELAND 9, OHIO

PRODUCTION PLANTS also at Plymouth, Wisc., Ogdensburg, N.Y., Chicago, Ill., Detroit, Mich., Jamesburg, N.J.
PLASTICS DIVISIONS at Plymouth, Wisc., Ogdensburg, N.Y. • ABRASIVE DIVISION at Cleveland, Ohio
New York Sales Office—1186 Broadway, Room 223
IN CANADA—The Cleveland Container Canada Ltd., Prescott, Ontario

All classified advertisements payable in advance of publication. Rates: $5.00 up to sixty words; enclosed in border, $10.00 per inch.

Classified Advertisements

Publisher reserves the right to accept, reject or censor a classified copy.

PACKAGING PLANT, extensive modern machinery, will custom pack your product for NW territory. Trackage, receiving, shipping, billing, 3 carload refrigerators. 24 inch assembly or sorting conveyor. Cello wrapping. Cello bagging. Labelling. Continuous monorail basket cooking in syrup. Vegetable wash and tray pack or bag. Confections cook and package in which we specialize. Complete premium deal servicing. Cayol Foods, 626—3rd Ave. No., Minneapolis, Minn.

PRESS MACHINIST—Fully experienced on Miehle printing and cutting presses. For mid-west division of national concern. Give full particulars as to experience, age and salary expected. Box 477, Modern Packaging.

BOW MAKING MACHINES WANTED. We are interested in a practical machine to tie small, narrow Ribbon Bows. Please write full details. Box 489, Modern Packaging.

AGENTS WANTED By Plastics Manufacturer—Advertising and display manufacturer with complete laminating, fabricating and moulding facilities desires representative outside New York City. Commission basis, state lines you are handling now. Ranger-Tennere, Inc., 450 West 31st St., N. Y. 1, N. Y.

EXPERIENCED PACKAGING sales specialist wishes to represent manufacturer transparent cardboard metal boxes. Established trade. Own showroom—office. Excellent location. Have good practical designing-merchandising ideas. Will invest in business or sell straight commission basis. Box 492, Modern Packaging.

FOR SALE—One unused late model Packomatic Model "D" Top Gluer, 8 ft. Belt Compression Unit, complete with drives and motors. One new 30 ft. conveyor table. 115,000 Pint size paper containers, 200 to case. Two 850 gal. glass lined tanks with agitators. Box 494, Modern Packaging.

WANTED TO PURCHASE: We are manufacturers interested in the purchase of automatic machinery already in production for the fabrication of sheet acetates. Have you machinery that can fold, fuse or form this material? If so, communicate with us. Box 500, Modern Packaging.

PACKAGING BUSINESS with established following is offered for outright sale. Automatic bag and envelope filling machines, heat or glue seal. Stokes Filler, Day mixers and so forth. Adequate space. Box 501, Modern Packaging.

WANTED—NEW PROBLEMS. Midwest package designer has available time for new accounts. Invites inquiries from established manufacturers who need package designs for new products. Box 502, Modern Packaging.

WANTED to Exchange or Buy a Transwrap Machine Stokes and Smith Model "B." Can offer a Transwrap Machine, Stokes and Smith Model "A" in exchange. Box 503, Modern Packaging.

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COST REDUCTION: Methods and procedures; development and improvement. Motion Study. Work Simplification. Plant layout. Production planning and control. Analysis of management and production problems. Product analysis and improvement. Reasonable rates. Consultant to small and medium manufacturers. Box 496, Modern Packaging.

WANTED CELLOPHANE WRAPPER—for 9″ x 4½″ x 1⅝″ package at sixty packages per minute. Immediate delivery. Box 498, Modern Packaging.

PACKAGING DESIGNER: Must have creative ability and initiative; also ability to test results with prospective users. Understanding of temperature control preferable. Company located New England, is largest in its field, with branches throughout the U. S. Excellent opportunity for right man. Box 497, Modern Packaging.

FOR SALE: Simplex Bag Machine used less than one year. Guaranteed good condition. Box 493, Modern Packaging.

Let us sell your surplus stock of glass Containers and Closures. Clients all over the U.S.A. We can also fill your needs. Glass & Closure Exchange. Box 488, Modern Packaging.

WANTED—Sample Maker with all around bindery experience. For a man who has creative ability and style sense, we can offer an interesting position with a nationally known Chicago manufacturer of leatherette novelties, boxes and book covers. State age, experience and salary required. All replies treated confidentially. Box 499, Modern Packaging.

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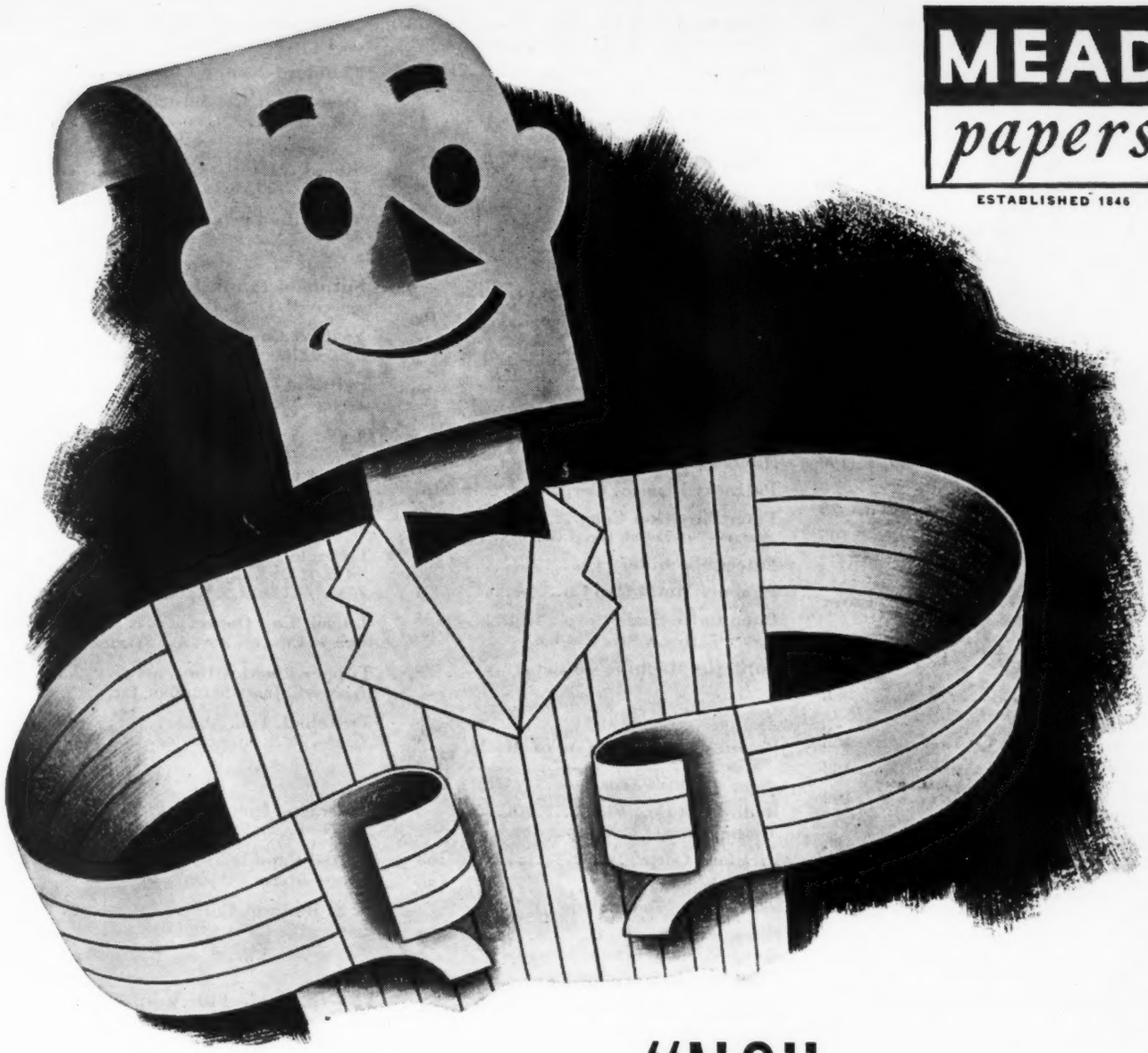
FEBRUARY 1947



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papers
ESTABLISHED 1846

THIS MAN IS A "NO" MAN

He's obsessed with the idea that functional paper can, and should, shut out the ills which packaged products are heir to.

The Mead Paper Man has an uncanny knack for saying "No!" to heat, cold, humidity, vapors, greases, gases, moulds, and other baleful intruders . . . and making it stick. He's the modern research laboratory of the Mead New Products Division. His full-time job is the development of functional papers tailored specifically to *your* manufacturing, warehousing, distributional, or merchandising needs. Pose your problem for him, and if there's a paper solution to it, he's most likely to come up with the right answer. For he doesn't start from scratch: He draws upon the accumulated know-how and vast resources of one of America's most versatile paper manufacturers, in its 2nd century of experience. Like all other really busy men, the Mead Paper Man can always find time to take on more work . . . *your work*. Call upon him without stint.

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MODERN PACKAGING

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WIRZ Collapsible Metal Tubes
match your markets' demands
for attractive, protected, convenient
packages . . .
The highly competitive markets ahead make an attractive, well-protected, convenient package imperative . . . especially if your product is a liquid, cream, paste or powder. You can be sure your package embodies all these advantages if it is a WIRZ Collapsible Metal Tube.
WIRZ Collapsible Metal Tubes are protection-convenience packages. They are carefully designed with—
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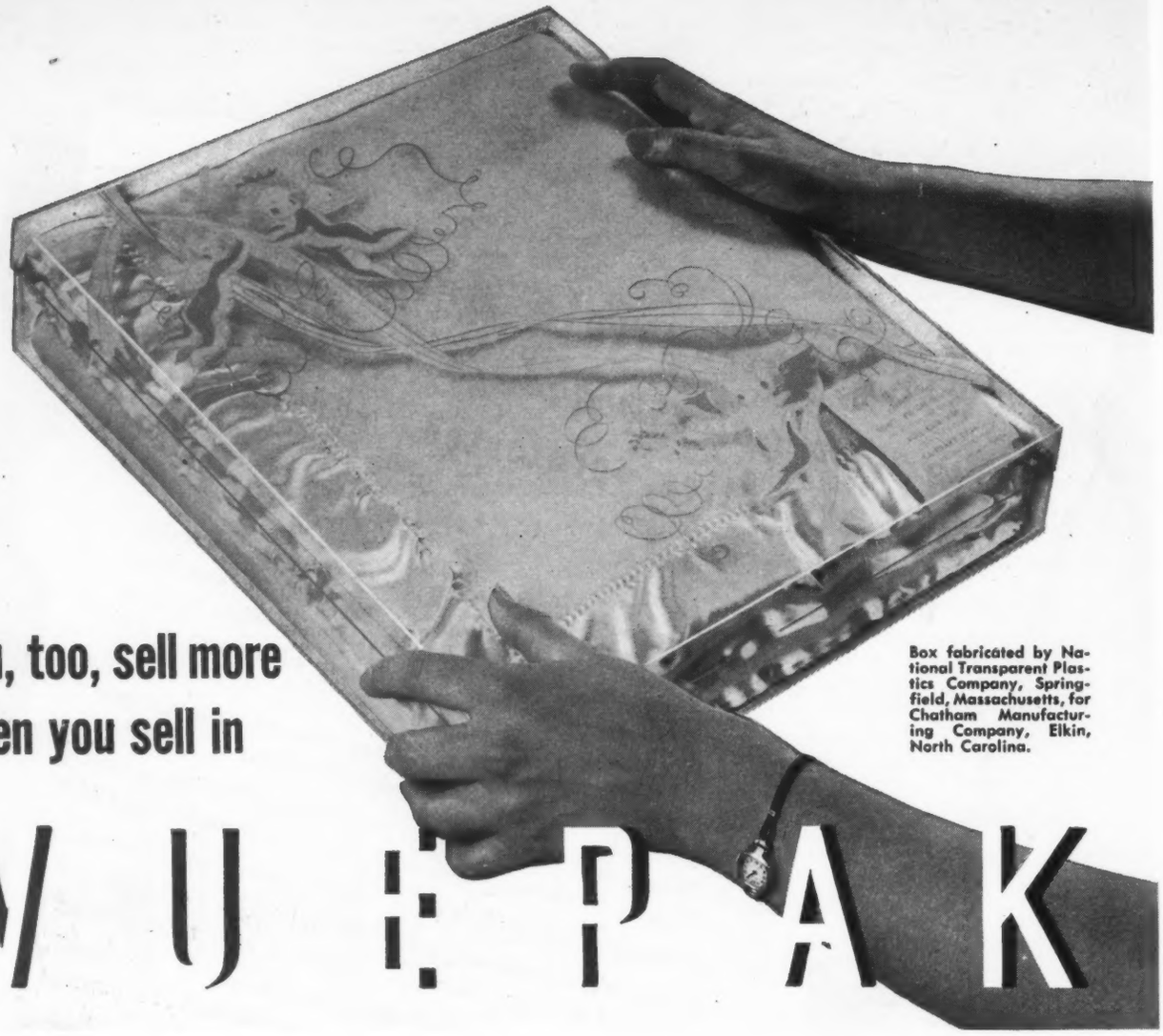


you, too, sell more when you sell in VUEPAK

Box fabricated by National Transparent Plastics Company, Springfield, Massachusetts, for Chatham Manufacturing Company, Elkin, North Carolina.

Chatham found this gaily printed, transparent container of Vuepak a real sales propellant for their attractive baby blankets. And you, too, will find that *your* product sells better when you show it in sparkling, crystal-clear, rigid Vuepak.

Besides allowing the color, beauty and design of your product to work harder for you, there's a definite sales plus in the interesting re-use possibilities of modern containers made of Vuepak.

Important, too, for volume sales is retailer enthusiasm for Vuepak'd merchandise. Retailers report that it's: (1) faster moving . . . selling time and expense is reduced, (2) fully protected from shopwear . . . quality price is firm as long as it remains in stock, (3) prestige-building, (4) better for display . . . stacks easily, lighter in weight.

Get full Vuepak facts from your box-supplier now . . . or write: MONSANTO CHEMICAL COMPANY, Plastics Division, Springfield 2, Massachusetts. In Canada: Monsanto Ltd., Montreal, Toronto, Vancouver.

"See Monsanto Packaging Exhibit, Booth No. 1, Packaging Exposition, Philadelphia, Pa., April 8-11."

VUEPAK DATA

Vuepak is a transparent, tough, rigid, beautiful Monsanto cellulose acetate.

Available in sheets up to 30" wide and continuous rolls 30" wide up to 1000 ft. long, depending upon thickness.

Thickness: six standard gauges 0.005" to 0.020".

Unaffected by sunlight.

Unaffected by temperatures up to 200°F.

Easily and economically drawn, shaped, formed or folded into almost any shape with inexpensive dies.

Can be embossed, stapled, printed, cemented, or combined with other materials.

Vuepak: Reg. U. S. Pat. Off.

MONSANTO PLASTICS

SERVING INDUSTRY...WHICH SERVES MANKIND

VUEPAK

TRANSPARENT PACKAGING MATERIAL

big Business is going to the Dogs

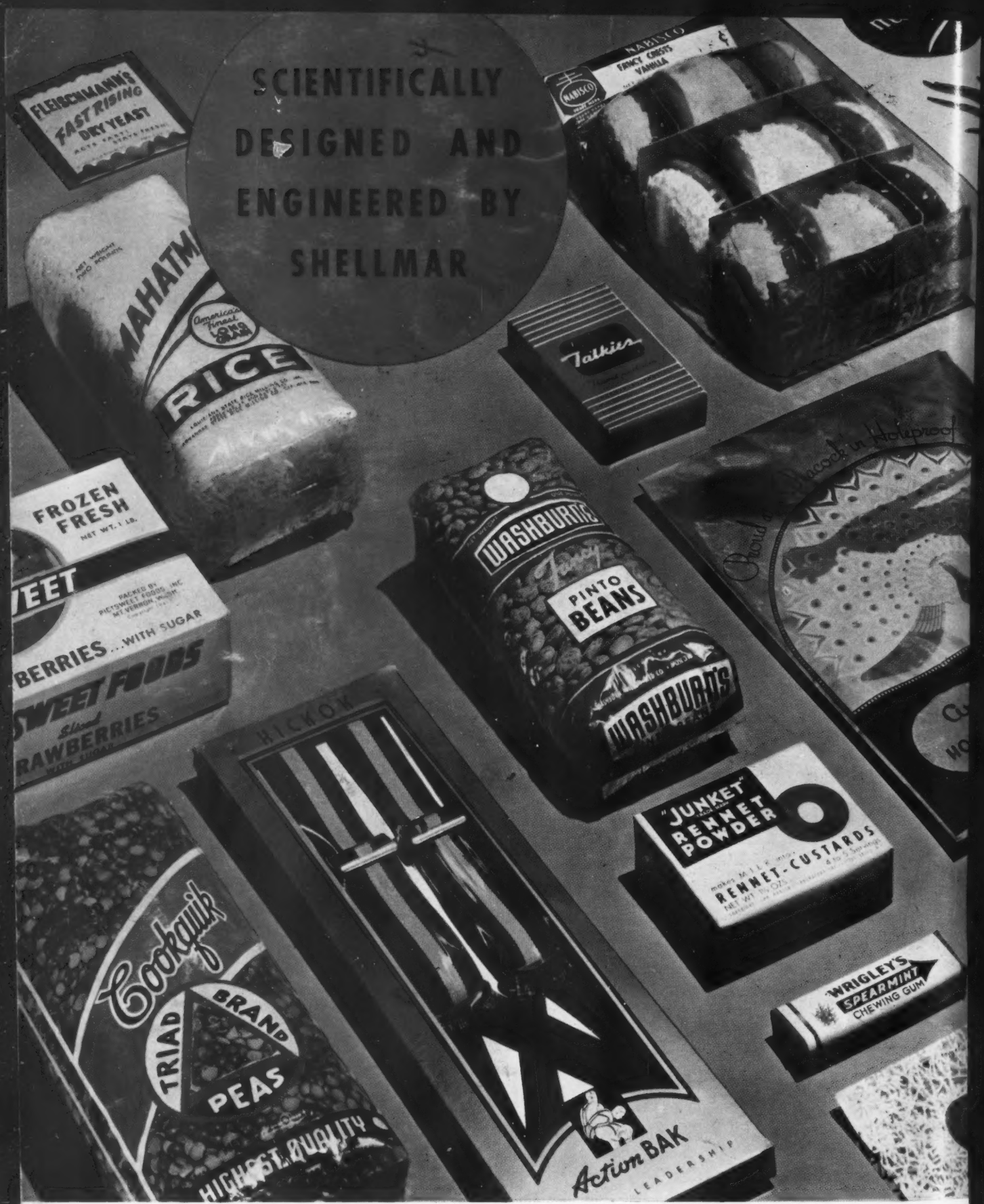
OUR present dog population, pedigree or otherwise, is around 15,000,000, so the experts tell us. Canine food consumption is big — over a billion pounds of dried and canned food sold yearly — and that's a lot of nourishment in anybody's language!

To meet a rapidly expanding, yet highly competitive market, the Ken-L-Products Division of The Quaker Oats Company decided recently to re-design their Ken-L-Biskit package. The new package, designed by Jim Nash, packs plenty of sales punch. It's colorful and so legible that you can see it from — well, almost a mile off. And for that final impression of quality, Ken-L-Biskit is packed in sturdy Michigan Cartons!

Whether it's dog foods, soaps, spark plugs, or what have you, any *really good* product deserves the finest sales package money can buy. Among the brand leaders Michigan Cartons are known as dependable sales winners.

Michigan
CARTON CO.
BATTLE CREEK, MICHIGAN

PACKAGING ENGINEERS FOR THE NATION'S TOP PRODUCTS



If you are contemplating a new package to give your product every advantage in the fast-moving days ahead . . . yet have no place in your plans for guess work . . . submit your problem to us. The experience and skill of Shellmar engineers and designers combined with Shellmar's unlimited research and production facilities assures the right package for *your* product.

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